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With Which Is Combined

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More News Print Mergers Possible In Canada

Directorate of Brompton Pulp & Paper Co. Reorganized, to Give Representation to New Interests—Ernest Rossiter, President of St. Lawrence Paper Mills Co. Among Others Added to Board—J. A. Bothwell, General Manager for Many Years, Elected President—May Shortly Be Only Three Dominating Groups

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, QUE., March 25, 1929.—The possibilities of further mergers of news print companies are held by many here to have been definitely advanced during the past week. What the developments are it is difficult to say, but one concrete piece of news is quoted in supporting the general idea, namely that the directorate of the Brompton Pulp and Paper Company has been reorganized to give representation to new interests. New members elected to the board at a special meeting are G. R. Cottrelle, Ernest Rossiter, E. A. Wallberg, and A. F. White. Mr. Rossiter is well known as president of St. Lawrence Paper Mills Company, and E. A. Wallberg is president of Lake St. John Power and Paper Company. Mr. White is the former president of the Standard Bank of Canada and now a member of the management of the Canadian Bank of Commerce. G. R. Cottrelle is supervisor of Utilities of Canadian Bank of Commerce.

J. A. Bothwell, who has been general manager of the company for many years, was elected president; and R. W. Steele, Montreal, vice-president. Two of the old directors who retained their positions are Charles G. Greenshields, Montreal, and J. E. McCrae, Sherbrooke, Que.

It is said that hope is still being entertained for an ultimate consolidation of the Abitibi and Canada Power and Paper interests, and that therefore there may shortly be only three dominating groups in the news print field in Eastern Canada.

Howard Smith's Strong Report

A healthy position in assets and an increase in earnings are shown by the report of the Howard Smith Paper Mills, just forwarded to shareholders. The report covers the nine-month period under December 31 last, and is the first report issued since the formation of the new company last spring, when control was purchased by the Holt-Gundy interests.

Earnings for the nine-month period totalled $1,007,637, from which have been deducted bond interest of $275,660, preferred dividends at $157,500 and $150,000 reserve for depreciation. The balance available for common shares and transferred to surplus account is shown at $424,477 for nine months, this being at the rate of $565,900 per annum, or the equivalent of $2.82 on the no-par value common shares. Fixed assets are carried at $12,346,861, an increase of $638,000 since publication of the balance sheet as at March 31, 1928.

It was added that: "The operations of the Canadian Cellulose Company, one of your company's wholly owned subsidiaries, for the year ended December 31st, 1928, showed a small operating profit which is not included in your company's profit and loss account. This company operated at approximately 75 per cent of its rated capacity during the past year, a position which is showing gradual improvement.

Bathurst Co.'s Report

The first annual report of the Bathurst Power and Paper Company for the year ended December 31 last shows profits from operations for the year at $411,781. Deduction of interest on bonds at $56,568; other and discount at $15,510; depreciation at $200,000; organization expense at $12,955 and provision for bad and doubtful accounts at $5,000, left a balance for profit for the year, before making provision for Dominion income tax, of $121,748.

The president, Brig.-Gen. J. B. White, in his remarks, says: "Owing to the unsatisfactory news print market during the year, your news print mill was operated at only 71 per cent of capacity. The pulp market permitted the running of your sulphite and kraft mills at 92 per cent and 100 per cent of capacity, respectively. The physical assets of your company have been well maintained and are in first class operating condition.

"During the year, your directors deemed it advisable to install the second news print machine, the contract for which was awarded, and the buildings erected, by the Bathurst Company prior to the acquisition of the properties by your company. This work is now progressing and it is expected that the machine will be ready for operation by the 1st of April, 1929."

Paper from Straw

Very little has been heard lately about the proposals for the establishment of plants in the Prairie Provinces to manufacture paper from the waste straw of the grain fields. The subject has now been brought to the fore again by a resolution from a convention of the United Farmers of Alberta urging immediate action to investigate the possibility of a straw paper industry in Alberta. It is estimated that around 10,000,000 tons of straw is annually destroyed in the Prairie Provinces.

In 1923 the government of Alberta made arrangements for laboratory tests on what is known as the Bache-Wiig process by the Pulp and Paper Division of the Forest Products Laboratory at Montreal. Results were imminently satisfactory, it being demonstrated under semi-commercial conditions that straw pulp was admirably suited to the manufacture of pulp and paper products. The report states: "It seems justifiable to state that this process will yield a pulp from straw of higher unbeaten strength than

(*Continued on page 86*)

Northern Paper Mills Plan New Beater Room

Approximately $50,000 Will Be Expended For Improvement At Green Bay, Wis.—Change Is In Line With Series of Expansions Made At This Plant to Modernize and Increase Production—Sensenbrenner Again Heads Kimberly-Clark Corp.

APPLETON, Wis., March 25, 1929—Construction of a new beater room at the Northern Paper Mills, Green Bay, Wis., will commence soon, according to announcement made by the company last week. Approximately $50,000 will be expended for this improvement. Details of the construction have not been announced, but the change is in line with the series of improvements made at the Northern mills to modernize and increase production.

Kimberly-Clark Officers Re-elected

F. J. Sensenbrenner was re-elected president of the Kimberly-Clark Corporation at the annual meeting of stockholders and directors last week at the company's offices at Neenah, Wis. All of the officers were re-elected as follows: Vice presidents, Ernest Mahler, John F. Sensenbrenner, S. F. Shattuck and William Bonifas; secretary-treasurer, Harry Price; assistant secretary, C. A. Sommers.

Efficiency of Steam Generating Plants

Small water power plants are giving place to generation of current by steam, according to a survey made for the state legislature by Adolph Kannenberg, a member of the Wisconsin Industrial Commission. Some of the small plants have been abandoned entirely. This situation is caused primarily by the water situation. The flow is not uniform enough to assure a constant supply of power throughout the year, and an auxiliary plant usually is necessary. This increases the overhead so the power costs more than when it is produced by modern steam generating plants. Mr. Kannenberg points out, however, that the large hydro-electric plants, when in a strategic location, are capable of producing the cheapest power. An example of the efficiency of modern steam generating plants is shown in a comparison. The Lakeside plant of the Milwaukee Electric Railway and Light Company, Milwaukee, Wis., generates a kilowatt hour of electricity with 1.21 pounds of coal, while a plant at Richland Center, Wis., requires 11 pounds of coal for the same amount of energy.

Shipping Facilities to be Improved

Better shipping facilities will be provided mills at Green Bay and DePere, Wis., through the deepening of the Green Bay Harbor to 21 feet. An appropriation of $700,000 has been made for this work by congress and it will be started this spring. About two years will be required to complete the job. This improvement will facilitate the shipping of coal, pulp wood and other materials via the Great Lakes to Green Bay and the Fox River Valley.

Industrial Safety Meeting

Voyta Wrabetz, of the Wisconsin Industrial Commission, spoke at an industrial safety meeting at Marinette, Wis., attended by 227 persons. The speaker reminded the paper mill workers and others that Marinette county had more permanent disability cases than any other section of Wisconsin and urged greater safety precautions. The average for the state in 8 per cent, he said, but in Marinette county it is 16 per cent. Savings of time and money for both the employer and employee were given emphasis by his remarks.

Water Power Expansion Faces Curtailment

Water Power expansion in Wisconsin faces curtailment through a bill which is now before the state legislature for passage. The measure would give the Wisconsin Railroad Commission the right to refuse a permit to build a dam where scenic beauty of the state would be marred to any marked extent. It is believed the proposed law is aimed at the dam which was to be built at some future date on the Wolf river in the Menominee Indian reservation by the Insull power interests of Chicago. Many organizations have protested against despoiling the beautiful woodland scenery of the reservation because of its effect on the tourist business. One of the largest dams in the state would be possible because of the immense fall of water within the reservation. The bill has been ordered for engrossment in the state assembly, and will come up for a third reading and final vote soon.

Consolidated to Entertain Publishers

Something rather novel in the way of building good will among customers will be undertaken by the Consolidated Water Power and Paper Company, of Wisconsin Rapids, Wis. The company will tender a summer recreational trip to owners, publishers and chief executives of daily newspapers in the middle west, (one representative to a paper) on August 9, 10, 11 and 12. All transportation, meals, lodging and entertainment will be furnished by the company.

The publishers will visit the famous north woods of Wisconsin, Michigan and Minnesota, including the recreational region where President Calvin Coolidge spent his vacation last summer.

News of the Industry

An attractive invitation and folder has been sent to all members of the American Pulp and Paper Mill Superintendents Association announcing the tenth anniversary convention at Wausau, Wis., June 6, 7 and 8. All members are asked to forward their reservations to the arrangements committee at once, so that hotel accommodations may be provided. The letter calls attention to the fact that Wisconsin is primarily a paper mill state and that nearly all grades are made within a short distance of Wausau. Members are urged to bring their wives, who will be furnished entertainment by a committee headed by Mrs. D. C. Everest.

Views of several paper mills, and the Rothschild park pavillion where the convention banquet will be held are shown on the folder. It contains also a map showing where paper mill cities of the state are located, the roads leading to these cities from Wausau, and the location of airports. Invitations are signed by R. H. Kelly, general chairman.

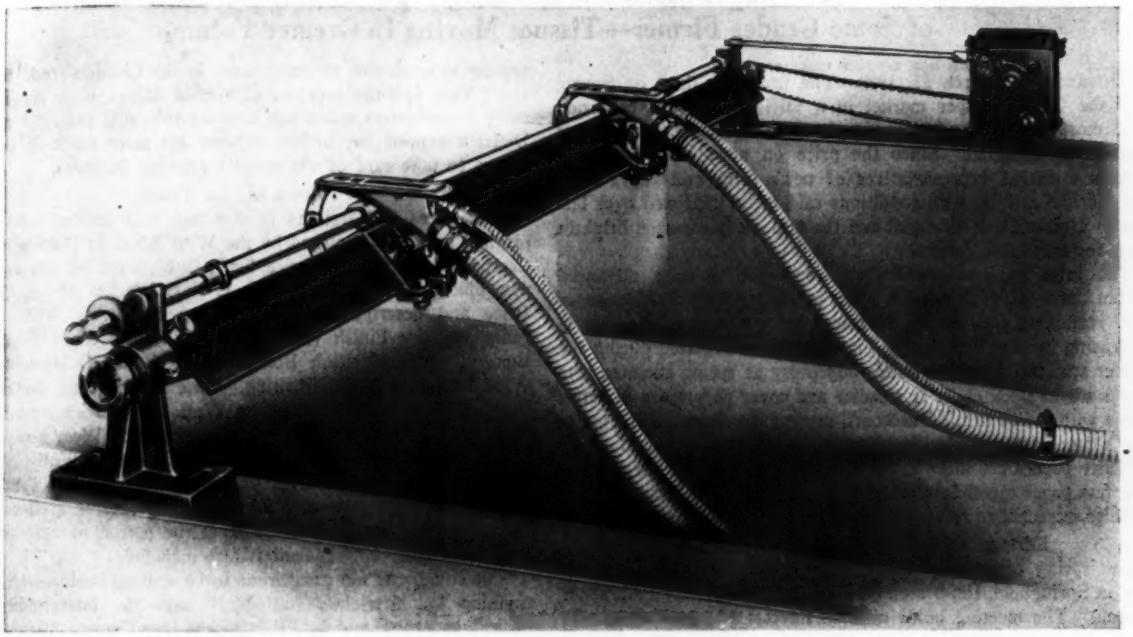
C. E. Jackson, who resigned recently as manager of the Thunder Bay Paper Company, Port Arthur, Ont., was tendered a farewell banquet at that city by 65 executives and employees of the mill. Mr. Jackson retired as manager when the Thunder Bay mill was sold by the Consolidated Water Power and Paper Company, of Wisconsin Rapids, Wis., to the Abitibi interests. He is returning to Wisconsin Rapids to continue in the employ of the Consolidated company. Mr. Jackson was presented with a movie kodak by his Thunder Bay associates.

C. K. Boyer, manager of the Interlake Pulp and Paper Company, Appleton, Wis., was one of the principal speakers at the recent convention of the International Society for Crippled Children at Minneapolis, Minn. He pictured the extent of industrial hazards, and the necessity of a policy in industry where compensation is paid cheerfully, and rehabilitation work is given gladly for those thus incapacitated.

Crown Willamette Improvements

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, ORE., March 21, 1929.—The Crown-Willamette Paper Company which recently announced plans for a $3,000,000 improvement at Gamas, Wash., will also sponsor an improvement program at their plant at Ocean Falls, B. C., according to G. P. Berkey, general manager.



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Demand for Paper Fairly Good in Chicago

Request for News Print Has Increased and Outlook for Future of Industry Is Brighter Than For Some Time—Coarse Paper Market Is Showing Signs of Improvement With Prices of Some Grades Firmer—Tissues Moving In Greater Volume

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., March 25, 1929.—The first few days of Spring find the Chicago paper market in a fairly prosperous condition with most grades of paper anxiously awaiting the demand that is confidently expected. Since the price on news print has been definitely settled, representatives of news print mills have gone into normal activity with conditions said to be improved over last week. Demand has increased and the outlook is reported brighter than for some time past.

The price of southern kraft is reported to have advanced within the past ten days, with other grades in the wrapping paper field remaining firm as far as prices are concerned. Activity is increasing in these lines and a big business is expected during the Easter season. Tissues are also improving as spring business gets under way. Book paper is steadier and cover papers are in better shape with prices firm. The board market is reported to be going into a more active period but the prices are still not satisfactory.

Waste papers are more active with conditions good for Spring. The fine paper merchants are running better than a year ago and are also expected to find conditions improved as Spring wears on.

Editors to See Cornstalk Paper Made

The spring meeting of the Illinois Press Association will be held in Springfield, Ill., March 28, 29 and 30, at the Hotel Abraham Lincoln. The meeting holds unusual interest to paper merchants inasmuch as the editors attending the event will visit the plant of the Hopper Paper Mill at Taylorville, Ill. Here they will be given an opportunity to see the actual making of cornstalk paper after which a banquet will be served to those present. Corwine E. Roach, president of the Capitol City Paper Company, at Springfield, is in charge of the entertainment arrangements. A feature of the program will be an address to be given Friday, March 29, by Charles H. Barr, Holyoke, Mass., sales and advertising counsel for paper mills, merchants and printers, and well known in the paper trade.

Dr. A. D. Albert Addresses Waste Material Dealers

Dr. Allen D. Albert, assistant to the president of the Chicago World's Fair was the chief speaker at the Sixteenth Annual Banquet of the National Association of Waste Material Dealers, Inc., at the Congress Hotel, Chicago, March 20. Dr. Albert spoke to a large audience, which numbered many Chicago representatives of the waste paper and paper stock trade, on the subject of "Utilization of Waste Products."

Benjamin Friedman, of the Metal Refining Company, of East Chicago, was chairman of the Banquet Committee which functioned to give the association its most instructive and entertaining event so far, according to reports. Carlton B. Overton, first vice-president, was toastmaster for the evening.

All through the three days program executives of waste paper and paper stock organizations took an active part, especially on Wednesday morning, when both of these important branches of the association met.

P. B. Fleming Joins Dietrich Paper Co.

The D. W. Dietrich Paper Company, 228 North LaSalle street, Chicago, has recently obtained the services of Peter B. Fleming, who will specialize in the sale of high grade coated papers and book papers for the rapidly growing Chicago concern. Mr. Fleming was formerly with the Midland Paper Company and is well known in the paper field, his former connections and experience assuring him of a warm welcome in his new position. Only a few years old, the D. W. Dietrich Paper Company has grown rapidly to a position of importance in the Chicago trade field. A short time ago the services of Gerald Miner were secured, the office headquarters space has been considerably enlarged and Mr. Dietrich expects to further increase his sales force in the near future to take care of the rapidly growing business.

News of the Trade

Stock sizes and weights in standard mill grades, sold in the original packing, furnished by the West Virginia Pulp and Paper Company together with price list, has been mailed out from the new offices of that company at 35 East Wacker Drive, Chicago. Price and descriptions are furnished on Super White, Super India, Machine Finish White, Eggshell White, White Bond, Blue Bond, Buff Bond, Pink Bond, Canary Bond, Goldenrod Bond, White Writing, Canary Writing, White Mimeograph, Index Bristol and Cream Post Card. The West Virginia Pulp and Paper Company also issues its edition Number 43 of Westvaco Inspirations for Printers which provides a discussion of "Full Color, the magic formula in printed salesmanship." Included in the discussion of the need for color and its many uses is an interesting article on typographical effects from the period of Romanticism. A splendid story on woodcuts is also included.

"The country is too prosperous to be writing business letters on anything but first-class stationery" says the latest edition of "Rags", sponsored and published by the Rag Content Paper Manufacturers. The attractive little magazine, of which this is issue Number 9, gives a good talk on the opportunity afforded printers, lithographers and engravers to furnish the highest quality of paper to their patrons.

Ways and Means Members Visit Holyoke

HOLYOKE, Mass., March 26, 1929—Congressman Allen T. Treadway with Congressman Carl R. Chinblom of Chicago and Congressman K. M. Davenport of Clinton, N. J., all members of the Congressional Ways and Means Committee accompanied by Frank-lin H. Smith, chief of the paper division of the Tariff Commission, and W. A. Graham head of the textile division of that body, paid a visit to Holyoke last Tuesday and as the guests of President Sidney L. Willson of the American Writing Paper Company spent the day in studying the paper and textile manufacturing situation.

Paper manufacturers are asking specially for partial reclassification in the tariff rates, it being known that a considerable quantity of German and English fine grades of paper get through owing to defective classification. This was a point urged by William F. Whiting, former Secretary of Commerce on his return to his home city.

The plant of the Chemical Paper Manufacturing Company and the Beebe & Holbrook Division of the American Writing Paper Company were the paper mills visited. The visitors also inspected the new and enlarged research laboratories of the American Company now located in the Wauregan mill.

Following the visit to the mills an informal conference was held in the office of Mr. Willson.

Speeding Production at Union Bag Plant

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, ORE., March 21, 1929.—The plant of the Union Bag Company, at Vancouver, Wash., is now operating twenty-two bag-making machines. A small force of experts is training a crew of operators, the experts having been brought to the plant for this purpose. As the regular help becomes proficient the plant will turn out 1,500,000 bags daily.

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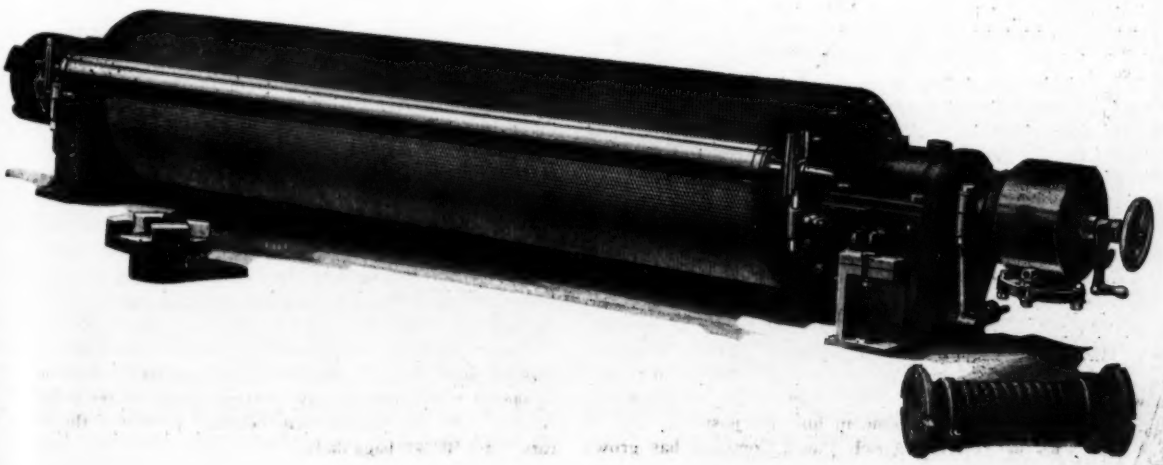
The shells for Downingtown (Kilberry Patent) Suction Rolls are made by the centrifugal casting process, which assures a homogeneous metal. The metal used is a special composition bronze and this method of casting assures a perfect grain structure and density from end to end, free of all imperfections.

The Downingtown Shell is heavy and properly proportioned to withstand, without deformation, the stresses of modern high speed operation.

Literature and copy of our favorable Suction Roll Decision from the U. S. Court of Appeals sent on request. *Downingtown, Mfg. Co., Downingtown, Pa.*



Paper Business Rather Quiet in Toronto

While Wholesale Trade Is Only Moderately Active, Practically All Ontario Mills Manufacturing Fine Papers Are Operating At Close to Capacity—Book Paper Plants Have Orders Booked Well Into Summer Months—Other Mills Also Busy

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., March 25, 1929.—There is hardly the volume of selling in the wholesale paper section that the trade would like to see and on the whole business is inclined to be somewhat quiet. Consumers are buying in small lots, as a rule, and while the total of orders is considerable, there are not bulking large at the moment. In fact the year opened up well but there appears to have been a falling off in business in the distributing end of the paper trade. Dealers agree that it is nothing to worry about, however, and if the spring trade opens up well there will be little to complain of concerning the volume of sales since the beginning of the year. On the whole fine papers are selling well but in this as well as in other sections of the wholesale paper trade there is a distinct tendency to buy in small quantities as far as the printing and other consuming sources are concerned. Despite the fact that wholesalers point out that the printing trade can save at least twelve per cent by stocking up liberally on standard lines of paper they are using all the time, the printing industry does not feel inclined to tie up even a portion of its capital in stock and as a consequence they are buying in small quantities and losing money. In many instances the printer does not buy his stock until the job is locked up.

While the wholesale end of the paper trade is admittedly rather dull, there has been very little diminution in paper manufacturing activities. Practically all the mills manufacturing fine paper are operating close to capacity and in the matter of book paper the plants have orders booked well into the summer months. Bond, ledger and writing mills are also busy and are well employed. The coarse paper market, both from a manufacturing and a distributing standpoint, is only moderately busy. The paper bag market is none too strong and has been suffering from a lot of outside competition. However, with firmer prices developing in the States it is believed that the Canadian paper bag industry will pick up shortly. Paper converting plants are fairly busy under a brisk demand for envelopes, blank books, forms, etc., while board mills and the paper box industry are showing a satisfactory degree of activity.

Victoria Moves to New Quarters

Victoria Paper and Twine Company, Ltd., which for years has occupied premises on Wellington street West, Toronto, has completed removal of stock and offices to its newly constructed building at 169,171 and 173 Fleet street, where they have one of the finest among the smaller commercial buildings on the city's waterfront development. The structure is of reinforced concrete of the flat slab type, with brick and stone finish, 80 by 132 feet, and three stories in height. Construction started in September, 1928, and has been quickly rushed through to completion. Oil heating is to be used, an automatic oil burner having been installed. Rolling fireproof doors have been placed in the building—at front and rear—and the elevator openings are protected in the same manner. Both offices and warehouse are the last words in convenience and planning. Every consideration in the matter of the construction and planning of the building has been given with a view to the most economical and expeditious handling of the large stock of wrapping papers, toilets, tissues, paper specialties, etc., that the company carries.

Victoria Paper and Twine Company, Ltd., is closely affiliated with both Canadian Vegetable Parchment Company, Ltd., and Garden City Paper Mills Company, Ltd., at Merritton, Ont. Leo Charles, president of Victoria Paper and Twine Company and Canadian Vegetable Parchment Company, is managing director of all three companies. Among the products manufactured by Canadian Vegetable Parchment Company, Ltd., which Victoria Paper and Twine Company handles, is "Purity Brand" pure genuine vegetable parchment, plain and printed, in all forms for the dairying, farming, fishing, and meat-packing industries. It also handles the following products manufactured by Garden City Paper Mills, Ltd.: tissue papers, toilet papers, paper towels, waxed papers and light weight paper specialties. Victoria Paper and Twine Company, Ltd., is, in addition, the Ontario distributor for Continental Paper Products, Ltd., of Ottawa, carrying its complete line of grocery bags, all kinds of specialty bags and ice cream pails, as well as its "Lily" drinking and ice cream cups. Further, it is the Toronto distributor for "Nibroc" paper towels, and is also a distributor for "Sealright" containers. The company is also established in Montreal where they have a large warehouse at 830 Notre Dame street West and in which a comprehensive stock of their own mills and other lines are carried.

Victoria Paper and Twine Company, Ltd., is now in the twenty-first year of its existence. From small beginnings it has risen to a position of considerable note and prominence in the Ontario paper field and in the Dominion as well. The location on the water front, adjacent to railways and steamship lines, is a strategic one and it would appear as if the company were well in line to participate in the looked-for expansion in the paper and general industries in Canada.

Notes and Jottings of the Trade

John Nelson and 29 other residents of the township of Whitney Bay, Ont., have filed a writ at Osgoode Hall, Toronto, claiming $15,000 damages from T. S. Woollings & Co., lumber and pulpwood dealers, Connaught, Ont., for alleged injury suffered by them. It is claimed by plaintiffs that the damage was the result of the negligence and wrongful acts of the defendants causing the flooding of property and effects owned by the plaintiffs.

Sir Charles Gordon, Montreal, who is a director of Provincial Paper, Ltd., Toronto, has been elected president of the Royal Trust Company, Montreal, in succession to the late Sir Vincent Meredith.

Frederick Woods, Sudbury manager for the woods operations of the Abitibi Power and Paper Company, was a Toronto visitor at the Abitibi office a few days ago.

Norman Fair, of the Toronto office of the Alliance Paper Mills, Ltd., was summoned to his home in Midland a few days ago to attend the bedside of his mother who was dangerously ill.

A busness visitor to Toronto a few days ago was Harold Crabtree, of Montreal, vice-president of the Alliance Paper Mills, Ltd.

C. V. Hodder, managing secretary of the Canadian Paper Box Manufacturers' Association, has sent out a circular setting forth the attractiveness of Toronto as a meeting place for the members who are to assemble there on May 15, 16 and 17 in annual convention in association with the international body. The circular is accompanied by a personal message from the chairman of the convention committee, Robert S. Dunlop, who is the president of the Canadian Paper Box Manufacturers' Association.

E. H. Wilkinson, head of the E. H. Wilkinson Paper Company, Ltd., Melinda street, Toronto, has returned from a business trip through Western Canada to the Pacific Coast, calling on the paper trade in the larger centers. Mr. Wilkinson stated that he found business conditions in the west satisfactory, and especially good in British Columbia. The company are featuring an attractive line of their own known as "Brighter Gift" wrapping papers, which are being handled by the wholesale trade throughout Canada.

Cable Conveyor handling Pulpwood to mill.

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From the time pulpwood comes into your mill from the pond or car until it leaves as rolls or packages of paper or board it can be handled between every process of manufacture on the proper type of Jeffrey conveyor; likewise, in the boiler house there are many types of Jeffrey conveyors and elevators to handle any quantity of coal and ashes.

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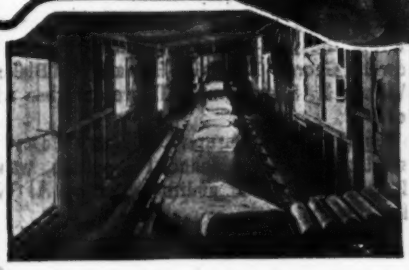
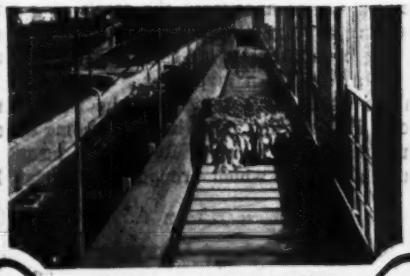
We want you to become better acquainted with the important features of Jeffrey Equipment. May we send you our catalog describing the particular type of handling equipment in which you are interested?



Belt Conveyors for handling Pulp Laps, Chips, etc.

Chain Conveyor handling Logs to mill.



Wood Apron Conveyor for handling Bundles of Rags, Paper Rolls, etc.

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JEFFREY
MATERIAL HANDLING EQUIPMENT

Boston Paper Association Meets and Dines

More Than One Hundred Members and Guests Attend 43rd Annual Meeting and Banquet of Organization At Algonquin Club Last Wednesday—Hubert L. Carter Again Elected President—H. I. Harriman Discusses Transportation and Park Problems

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., March 25, 1929.—With approximately 125 present, the 43rd annual meeting and dinner and the 164th regular meeting of the Boston Paper Trade Association was held Wednesday evening, March 20, at the Algonquin Club. Preceding the banquet, there was a reception. At the head table were Hubert L. Carter, Henry I. Harriman, M. L. Madden, Albert R. Smith, Charles A. Esty, W. J. Raybold, T. Harry Casey, and F. Bendel Tracy.

After the members and guests were seated and the orchestra had played an enlivening selection, the business meeting was called to order by President Hubert L. Carter. Secretary F. Bendel Tracy read the applications for regular membership. F. H. Chapin, of Millers Falls, Mass., proposed by Arthur C. Hall, and James B. Ramage, of Holyoke, Mass., proposed by E. R. Lyman, and an application for special membership, R. H. Casey, of Sheldon Springs, Vt., proposed by E. R. Lyman. One ballot was cast for their election.

The report of the membership committee, Perry B. Von Olker, Chairman, showed a total of 200, including 189 active and 11 associate members.

Secretary Tracy read the names of those members who had died during the year—Frank W. Power, W. R. Elliott, George J. Cadwell, George E. Hall, Howard L. Blake, T. E. Allen and William B. Stevenson. All present rose while taps were sounded.

The report of the treasurer, T. Harry Casey, which showed the association in good financial condition, was read and accepted and that of the auditor, Charles A. Wood, was accepted.

Election of Officers

The report of the nominating committee, J. W. Vivian, chairman, recommended no changes for officers and committees for the ensuing year. The following were elected, the secretary being instructed to cast one ballot.

President, Hubert L. Carter; first vice-president, Albert R. Smith; second vice-president, Charles A. Esty; treasurer, Thomas H. Casey, secretary, F. Bendel Tracy. Executive committee—Norman Harrower, Charles W. Fields and W. E Porter, Jr. Membership committee—Perry B. Von Olker, chairman; W. W. Jenks, Charles A. Young, Royden Loring and R. M. Stone. Arbitration committee—George W. Wheelwright, chairman; Arthur L. Hobson, Irving N. Esleeck and W. E. Pratt. Auditor, G. H. Wood. The nominating committee is composed of J. W. Vivian, chairman, C. S. Proctor, C. L. Baird and C. A. Esty.

President Carter announced the result of a vote for a two-days outing at Rye Beach, N. H., next summer, for which cards had been provided at each seat, saying that out of 62 votes cast, 54 were in favor and 8 against it. The executive committee would have some help, he added, in making their decision. He said that there had been some uncertainty among the members as to whether Rye Beach meant some place in Scotland, a remark which brought forth a laugh.

Henry I. Harriman Addresses Meeting

The president introduced Henry I. Harriman, who is president of the Boston Chamber of Commerce and chairman of the Board of Public Trustees of the Boston Elevated Railway and of the Special Commission on the Charles River Basin, as a man always interested in the good of the community and gives unsparingly of his time for the public welfare.

Mr. Harriman, whose subject was "Some Aspects of Boston's Transportation and Park Problem," discussed interestingly three outstanding problems before the present Massachusetts legislature, the proposed East Boston tunnel, the rapid transit extension for the Boston Elevated and the improvement of the park system. He said that the proposed tunnel would save four miles between the North Shore and Boston and that a toll of 25 cents would more than pay for it, so that in another half-century it would be free from debt.

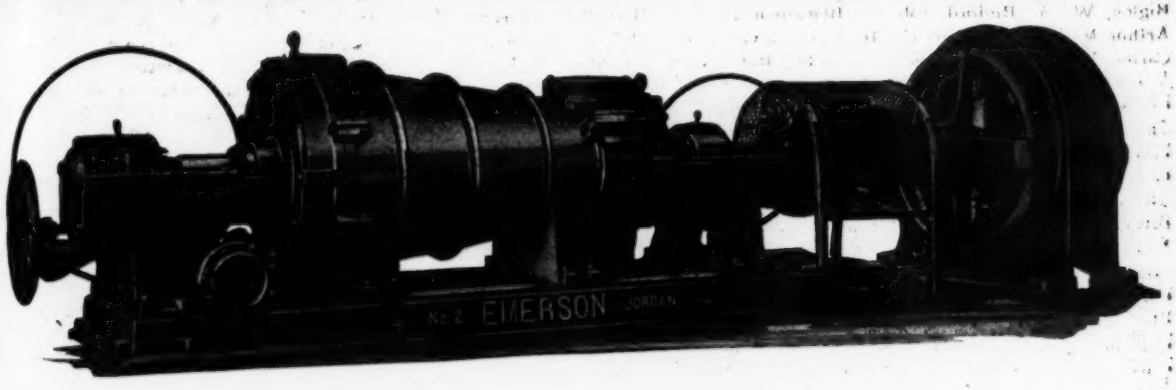
In discussing the rapid transit extension, Mr. Harriman gave a history of the Boston Elevated, which was organized in 1897, when provision was made for a fare of five cents for 25 years. After the great war the value of money became lower and in 1918, the public trustees appointed by the Governor took over the road. It was found necessary to increase the fare first to seven cents, then eight cents, and later ten cents. The road is now running on a favorable basis and paying costs. In the 10 years $42,000,000 has been spent and the Elevated has a plant superior to any other in New England. The road is in good physical condition. Ten years ago there were only 200,000 cars, but there are now 900,000, and with the congested highways, the road cannot give good service. For this reason the traffic is beginning to fall off slightly. Mr. Harriman noted the proposed extensions and that they would cost about $50,000,000, but that it would cost the taxpayer and others far more not to build them. In New York City the tax-payer is carrying every cent. It is not proposed to increase the burden on the tax-payer, but to ask for only a small proportion. A long-time extention of public control is proposed. The contest on the hill is between those who believe in public ownership and those who believe in public control, but private ownership.

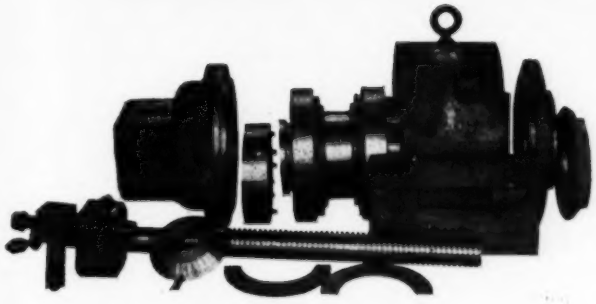
Mr. Harriman gave a brief history of the improvements of the Charles River basin and the construction of esplanades on both the Boston and Cambridge sides. It is now proposed to build a street in the rear of Beacon street to Watertown in connection with the improvement of the parking system. Residents on Beacon street object to having automobiles on each side of them, and it is urged that all the space is needed for the park space. There is no doubt but that the parking improvement measure will be passed. Whatever the final outcome there will be a much more beautiful and useful Charles River Basin. In closing Mr. Harriman said that possibly the best solution was to delay the construction of the disputed road in the lower basin for a year and have another commission appointed to study the project further in order to take advantage of the splendid offer of Mrs. James J. Storrow of $1,000,000, to make the basin a more beautiful place and more available for recreation.

President Carter said that Mr. Harriman would answer questions and as a starter asked what was proposed to relieve the congestion in streets in the vicinity of Park and Beacon streets to Washington street. Mr. Harriman said that he thought the solution lay in a circumferential elevated route around this section and allow no parking in the streets of that section.

List Of Those Present

Those present at the meeting were as follows: George D. Allen, George C. Andrew, Sumner B. Andrew, S. Guy Ashley,





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Here is a great step forward in Jordan design—a step that means constant efficiency, greater dependability in service, lower operating and maintenance cost.

One Emerson Jordan Timken Bearing takes care of both radial and thrust. Both bearings are *demountable* as a unit. They are mounted on taper-bored sleeves and *not* directly on the shaft. They can be removed and replaced with the least possible trouble and expense. The bearings are protected by sealed housings.

Backed by forty years of experience in the manufacture of high grade paper mill machinery, the Emerson Jordan Timken Bearing equipped is *the* Jordan for your mill.

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Lawrence — Massachusetts

DIVISION OF JOHN W. BOLTON & SONS, INC.

2608

C. H. Barr, Henry C. Barr, Sidney W. Bartlett, Edward D. Bement, L. S. Beverage, A. G. Brooks, D. K. Brown, W. J. Bigley, W. W. Binford, John F. Blackman, John H. Brewer, Arthur M. Burr, Matthew O. Byrne, C. C. Carpenter, Eliot O. Carter, W. L. Carter, Hubert L. Carter, Ralph Case, Herbert J. Casey, Roy H. Casey, T. Harry Casey, Paul D. Caskey, Frank C. Cate, Howard E. Chase, Asaph Churchill, Nathan S. Clark, Arthur D. Coffin, Dexter D. Coffin, A. E. Crowell, E. L. Cummings, Frank B. Cummings, Carroll DeCosta, Edward B. Dik, Robert W. Ely, Gordon E. Emerson, Howard Emerson, Charles A. Esty, Arthur F. Fay, Paul S. Fiske, H. C. Fowler, Arthur W. Frank, Arthur C. Hall, Arthur E. Ham, A. Lawrence Ham, Herbert C. Ham, Henry I. Harriman, Norman Harrower, Edgar P. Hay, Wm. H. Hilton, Ralph N. Humes, Hartley A. Hurlbert, Frederick H. Keep, John Kelley, Fred B. Korbel, John F. Kuster, Carl Lincoln, Herbert A. Lindenberg, H. E. Lindquist, E. H. Little, Wm. B. Livermore, Royden Loring, Willard H. Loud, Erving F. Lowe, M. L. Madden, F. W. Main, John McLaurin, Frank H. Merrill, R. T. Merrill, Aaron P. Mitchell, Walter L. Muzzey, Charles W. Nelson, Clifford Newell, J. J. O'Brien, Harold D. Otto, Arthur E. Pearson, A. H. Porter, W. Edwin Porter, Jr., Ernest R. Potter, Harper W. Poulson, Charles S. Proctor, W. J. Raybold, Louis S. Reynal, C. A. Reynolds, Horace B. Sargent, F. H. Savage, Charles A. Shaw, W. P. Simond, Wm. E. Smiddy, Jr., Albert R. Smith, Donald R. Smith, Jos. D. Snell, W. N. Stetson, Jr., J. G. Swift, J. Gilbert Swift, Jr., Roger B. Taft, A. A. Tanyane, Charles W. Townsend, F. Bendel Tracy, Harold Upham, Gardner Very, John W. Vivian, Charles K. Wadham, V. R. Walden, C. Frederic Wellington, Charles G. Wells, R. H. Welsh, Percy E. Weston, Herbert A. Wingate, Charles A. Wood, H. R. Woodward, Kendall Wyman, Charles A. Young, I. C. Young and Leon H. Young.

Demand at Indianapolis Improves

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., March 25, 1929.—With most grades of paper on a sounder price basis, the trade in Indiana is settling down to procuring some real spring business, apparently confident that the situation has been stabilized at least for the time being. The paper jobbers here are reporting a fair demand, better in fact than at this time last year. This is particularly true of the better grades of paper. The larger firms in this territory are getting ready to start their spring advertising campaigns and the demand from printers and lithographers is becoming more and more active.

Demand for news print is fair and the price is very low. The country papers seem more in the market, comparatively speaking than the city papers, which reverses the rule of last year when demand from the rural sections was very light. The city demand is about on a par with last year, with perhaps a small per cent improvement.

Demand for bags and wrapping paper is fair, here again the improvement being noticed mostly in rural sections. Inquiries are being received in greater volume for building papers, but the actual sales are just about equal to last year at this time. There are indications of an improvement this year in sales of this paper over the year before.

Lakeside Envelope Co. Insures Employees

Group life insurance protection has recently been acquired by the Lakeside Envelope Company, of 333 South Des Plaines street, Chicago, through a policy issued by the Prudential Insurance Company of America. The total amount of the policy involved is $45,250, covering 59 lives.

Each worker is insured in amounts ranging from $500 to $1500, according to the length of service and the rank or position held, and it is given to them without any cost, the policy being of the non-contributory type. The Lakeside Envelope Company assumes the entire expense.

Boston Paper Trade Happenings

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., March 25, 1929.—Arthur E. Ham & Sons, who have been appointed distributors of Merrimade Folding Coated Book, made by the Merrimac Paper Company, Lawrence, Mass., have never tried to put any coated paper on the market that has received such a favorable reception as this line. It is the first time known by this firm that envelopes have been made out of coated paper successfully, so that there is no saw edge. This paper folds so as to carry a message in a neat and dignified manner, and is strong, keeping the story intact. It has a bright white, high finish, giving half tones and color work the proper life and sharpness.

A "Strathmore meeting" was held at the office of the Storrs & Bement Company, Friday, when E. M. Hughes, sales promotion manager, and "Cy" Norton, assistant sales manager, talked with the salesmen on the advertised lines of the Strathmore Paper Company. The Stoors & Bement Company is issuing a new price list this week.

Carter Rice & Company Corporation has become a distributor of the lines of Chieftain Bond, made by he Neenah Paper Company, Neenah, Wis. K. Stuart, vice-president of that company, was at the office of Carter Rice & Company Corporation Saturday to explain the advertising and the principal points of this paper. The Esty Paper Company Division has stocked Chieftain Bond for some time.

Floyd Blackman, sales manager of D. F. Munroe Company, gave a talk at a sales meeting Saturday. Two of the paper mills were represented at the meeting.

George M. Graves, president of the George M. Graves Company, Inc., dealers in paper stock, returned from Europe last week on the *Lancastria*, after an absence of five weeks. His trip included nearly all of the prominent centers of the industry in Great Britain and the Continent. He learned that the supply of old rope and rags was exceedingly limited in most cases and that the demand for old rope by paper manufacturers over across had lessened the amount available for this country considerably. He found that the severe February weather interfered a great deal with the collection and shipment of roofing rags.

Tileston & Hollingsworth Company's house organ "How," for March, edited by A. V. Howland, printed on Crinoline Cover and Text, notes the favorable reception of that line of paper by the printers. The issue contains a "review" of the March sheet of the Tileston & Hollingsworth Calendar.

High Water Handicaps Mills

[FROM OUR REGULAR CORRESPONDENT]

LITTLE FALLS, N. Y., March 25, 1929.—Many of the paper mills in this section experienced considerable trouble in operating during the past week from the turbulent waters of the Mohawk River which have overflowed banks and destroyed considerable property. The Mohawk Valley Paper Company was forced to abandon night work as the swollen stream flooded the lower part of the mill and did considerable damage to electric motors. The damage, however, has been repaired and operations are again under way.

At Battenville the cold wave over the week-end checked the annual spring freshet in the Battenkill River but it did not come soon enough to prevent serious damage to the dam of the Phoenix Paper Mill. The work which had already been done in repairing a previous leak in the dam was washed away making it impossible to operate the mill. The first break in the dam occurred in January but had been temporarily repaired and a few weeks ago the plant was able to resume operations pending permanent reconstruction. It was announced that the latest break would necessitate a suspension of operations for several weeks at least.

New mill for Warren Manufacturing Co., Bloomsbury, N.J., designed and built by Austin.

Speed and Low Cost in Building

THE new mill for Warren Manufacturing Company, at Bloomsbury, N. J., pictured above, illustrates Austin building service for the paper industry in the East, while a new plant just completed for Union Bag and Paper Company, Vancouver, is a good example of the work Austin is doing on the West Coast.

In the allied industries this organization is equally active. A chemical plant in Louisiana, serving the paper industry, is one of Austin's recent contracts. At Tacoma, Washington, a large chlorine and caustic soda plant has recently been completed for Hooker Electrochemical Co. With headquarters at Niagara Falls, this company decided to build a branch plant in the Northwest to better serve the paper mills in that section.

With a national organization equipped to serve the paper and allied industries on every type of building project, Austin's experience and facilities naturally appeal to executives who want results quickly and at reasonable cost.

Austin will work from your own engineers' plans, or design and construct your plant complete, guaranteeing in advance: 1. Low total cost for the complete project. 2. Completion date within a specified short time. 3. High quality of materials and workmanship throughout.

For approximate costs and other information on any type or size of building project, phone the nearest Austin office, wire, or send the memo below.

THE AUSTIN COMPANY—*Engineers and Builders*—CLEVELAND

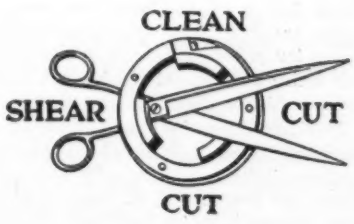
New York Chicago Philadelphia Detroit Cincinnati Pittsburgh St. Louis Seattle Portland Phoenix
The Austin Company of California: Los Angeles, Oakland and San Francisco. The Austin Company of Texas: Dallas. The Austin Company of Canada, Ltd.

AUSTIN

Memo to THE AUSTIN COMPANY, *Cleveland*— We are interested in a .....project containing.....sq. ft. Send me a personal copy of "The Austin Book of Buildings." Individual.....
Firm.....City.....
PTJ 3-28-29

Bearings~

FOR eliminating friction—saving time in lubrication—saving lubricants, Langston uses *oversized* ball or roller bearings in Langston Slitters and Winders. A roller or ball bearing greased *once a month* is better taken care of than a plain bearing lubricated *once a day*. Dependability is of vital importance in the operation of a Slitter and Winder. Because of their dependable performance and rugged construction, Langston Slitters and Winders have been used for over 12 years by the Emerson Carey Fibre Products Company, of Hutchinson, Kansas. Ordinary routine maintenance is relatively simple; labor costs have been reduced; trimming losses cut 50%, and Langston equipment has never caused a production tie-up. As in bearings, so in every detail of construction, Langston equipment is *dependable*. A catalog is yours for the asking.



SAMUEL M. LANGSTON CO., CAMDEN, N. J.
A. H. COX & COMPANY, SEATTLE, WASHINGTON

LANGSTON SLITTERS

Paper Demand Less Active In Philadelphia

While Inquiries For Estimates on Future Orders Are Fairly Numerous, Consumers of Paper Are Curtailing Their Requirements at Present—Recent Price Advances Indicate That Manufacturers Are Confident of the Future Trend of the Market

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., March 25, 1929.—Following the advance in certain grades of paper Philadelphia dealers were quite surprised to find that the increased values did not act as a stimulant to buying. On the contrary the market drifted into a "waiting and watching" type of trading as consumers curtailed their requirements despite frequent inquiries for estimates for future orders that have been coming into the paper merchants' offices since the new prices were listed. Though values were steadier, competitive bidding for orders again appeared as the duller trend indicated the temporary uncertainty which has gripped the mind of the users of paper merchandise, particularly those grades that have been recently advanced. As the jobbers are affected by uncertainty and hesitation in stocking by the consumers, the mills reflect conditions in these divisions of the trade and are confining production to immediate needs rather than to future possible requirements and springtime extensions ordinarily anticipated at this season. In normal years the mills seek orders through representatives who pay their preliminary springtime respects to the jobbers by personal contact at this season. This year there has been a dearth of such personal calls from distant out of town manufacturers and an absence of mill appeals through the mail of proportions that might indicate future preparedness in advance springtime campaigns. The rise in prices would indicate that mills are confident of future markets and must have on hand sufficient orders to hold prices for several weeks otherwise there would not have been an advance in values. The absence of canvassing from manufacturing sources is assurance that the mills have the situation well in hand and like the dealers are looking ahead to brighter days.

The improved weather has stimulated demand for drinking cups, tissues, towels and napkins, needed with warmer days. Tissues generally hold at lower values than in the same period of 1928. Though sulphate papers have been advanced, sulphites continue to hold around lower levels. There are free offerings of newsprint with steadier prices. Corrugated products of the cheaper grades were slower movers than the higher grades. Straw boards of the better sort were in steady request from converters in containers for food products. Boards were fairly active, but prices continue to be disturbing. Building papers were less active and showed the hesitancy of other lines of business.

Association To Give Special Survey Report

President Simon Walter, of the Philadelphia Paper Trade Association, is arranging to call a special joint session of the membership of the local body with the outside associates of the industry for the purpose of laying before the group the excellent work accomplished by the Survey Committee of the National association. To this end, invitations are to be sent at an early date to outsiders in the local paper field, requesting their attendance at this joint session, when Vice President W. S. Wilcox, of the Philadelphia association, and T. H. B. Smythe, delegate from the Wrapping Paper Division to the National Convention, recently held in New York, will discuss in detail the work conducted by the Survey Committee during the past year and that of previous years, which made possible the good results attained in 1928. This matter was laid before the Wrapping Paper Division at its monthly session last week and met the approval of all those attending.

V. H. Wendt Honored at Testimonial Dinner

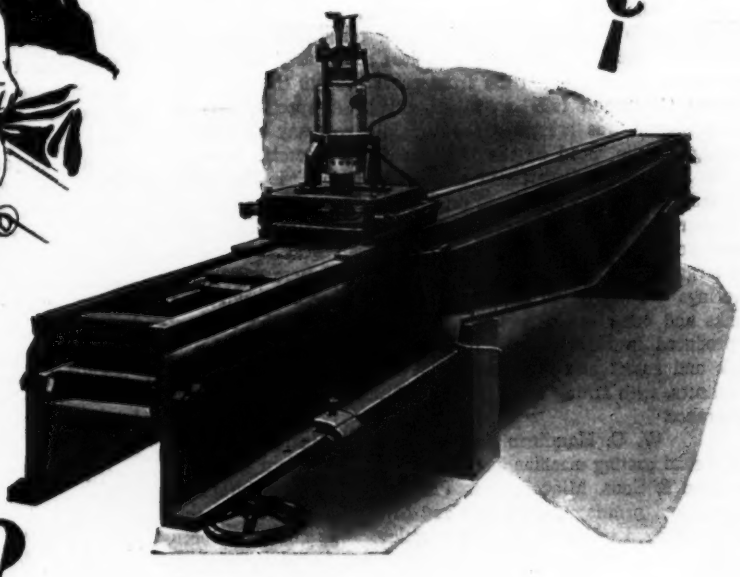
Associates of the Hinde and Dauch Paper Company, who for the past score years have been linked with the Gloucester, N. J. mills of the company and the Philadelphia sales office, joined in the testimonial dinner given to Valentine H. Wendt, retiring superintendent of the New Jersey plant, recently at the Walt Whitman Hotel, Camden. There were 110 employees and executives of the Gloucester mills and the Philadelphia offices present at the dinner when the retiring executive was presented with a handsome mahogany secretary, as tribute from his coworkers and token of their esteem and regard cherished over the long years of his management of the Hinde and Dauch container and board plant. On behalf of the workers, George McDowell, head of the electrical department of the mills, gave expression to this great regard as he handed the secretary over to Superintendent Wendt, and then left it to Chairman G. Hesser, of the arrangements committee, to greet his associates and to review achievements of the retiring executive from the early days of the mills establishment twenty years ago, when it started with ten hands, and its growth under his supervision to its present extensive size and employment of several hundred hands. With the retirement of Superintendent Wendt, his son and assistant at the plant for the past year, Walter D. Wendt, succeeds him. Henry Wendt, another son, will be assistant superintendent. From the Philadelphia office, Charles Wendt, a third son, conducts the sales of the Quaker City territory and his presence at the banquet with his staff of salesmen from this section, enhanced the family circle who paid honors to their parent. Others from the Philadelphia forces present were: Thomas McDonald, Harry Johnson, Richard Frishmuth, Lawrence Jones and Albert Jones. The retiring chief will devote his time to a tour of the Latin American countries before returning to his home in Gloucester.

Henry W. Stokes Retires

Henry A. Stokes, former president of the American Paper and Pulp Association, announces his retirement from the paper industry and from the presidency of the York Haven Paper Company, with mills at York Haven, Pa.

For the past forty years Mr. Stokes has been associated with the paper trade and the York Haven Paper Company which he organized with Harry Carter, brother of Charles L. Carter, at present Philadelphia manager of the McAndrews and Forbes Company board department. At the time of the organization of the York Haven Paper Company he was its treasurer, succeeding to the presidency upon the death of Mr. Carter twenty years ago. Others associated with the York Haven Company were the late John Simmons and his sons William L. and Thomas Simmons, of John Simmons and Sons, paper stock dealers, who disposed of their interests to the Continental Paper and Bag Company, which absorbed the York Haven concern about six years ago. Since the Continental company took over the mills Mr. Stokes has remained at the head of the York Haven Company and until his retirement on March 1 was active in its management. With his retirement from the industry he will devote his time to his other business interests and to the farm which he conducts near Media, Pa., after having served the paper industry as a promoter of the welfare of the American manufacturing branch of the trade and an authority on paper making and organized efforts in its behalf. The York Haven Mills will be continued under the Continental control as manufacturers of pulp and sulphite wrapping papers. The Philadelphia distribution of these products is under the direction of J. H. Wantling, of the International Paper Company's southern kraft division, who succeeds the former representative, Lewis T. Condon, whose death occurred last winter. Mr. Want-

Would you plane a BOARD with a JACK KNIFE?



So Why plane Box Surfaces by Hand?

To secure a uniform surface—without variation of any kind—on Suction Box covers by hand planing can never be done—any more than a smooth planed surface on a board can be done with a Jack knife.

Only one method can be used to restore the factory-made surface to all Suction Boxes. That is—with the Valley Suction Box Planer. It is the 1929 method of planing box surfaces. It is the machine which fits into modern production methods.

—and substitutes precision machine methods for variable hand planing—saves time—reduces planing costs.

These are three items worth careful consideration. Let us tell you more about the Valley Suction Box Planer.

VALLEY IRON WORKS CO.

Machinery for Paper and Pulp Mills

APPLETON WISCONSIN

New York Office: **350 Madison Avenue**

Western Manufacturing & Sales Division:
Smith & Valley Iron Works Co., Portland, Oregon

ling will continue to occupy the offices of the York Haven and Continental Company in the Land Title Building.

Frankot Book Covers For Curtis

An especially attractive cover paper was designed by the Franklin Paper Company, 806 Sansom street, manufacturers of leather substitute papers under the Frankot brands. The Curtis Publishing Company in seeking for a unique and rich cover for its compilation of data on advertising for the *Country Gentleman* sought the services of H. R. Hillegas of the Franklin company in producing a suitable leatherette paper cover for the book and the special rich flexible mahogany shade of leather substitute was designed in the laboratories of the Franklin Company plant in Camden. The leather paper is of sufficient weight to need no backing and is an excellent substitute for real leather that takes a beautiful design in embossed gold leaf of a farm with all its implements and houses on the front cover beneath the title "The Country Gentleman 1929" in raised effect. A special letter of commendation was presented the Franklin company by Charles Coolidge Parlin, head of the Division of Commercial Research of the Advertising Department of the Curtis Company, in which Mr. Hillegas was congratulated on his development of so perfect a leather substitute in crush grain effect. The Frankot leather substitutes have been gaining rapid favor all over the country and large orders have been placed with the firm here for unique coverings for all kinds of printed matter, suitcases, novelties, trunks and other products where leather is used. The Frankot is produced in rich leather effects in brown, mahogany, green, black and russet and is a departure from the ordinary leather substitutes, with strong and durable qualities as well as excellent appearance.

W. C. Hamilton & Sons Add Machinery

A special pasting machine has been added to the plant of W. C. Hamilton & Sons, Miquon, near Philadelphia, manufacturers of writing and printing papers and one of the oldest mills in this section engaged in this class of production. The mills have been equipped with a pasting machine that provides for any size sheet up to 38 inches. With this new unit the mill is fitted to do its own pasting of bristols, wedding announcements, greeting card stocks and other paper products requiring this type of equipment. Heretofore the pasting was done outside the mills. With the new unit the firm will be able to supply the dealers with speedier service in shipments of papers that require pasting.

Piqua Straw Board Mills Add Electric Motors

In order to handle all orders with despatch, the Piqua Straw Board Company has equipped its Tippecanoe City, Ohio, mills with electrical motors which were completed in the early days of the current month as announced at the Philadelphia offices of the company in the Drexel Building, under management of J. F. Chism. The installation of the powerful electric motors to supplant the former 700 horse power steam engine, provides the mills with power supplied through a local utility corporation and enables the speedier handling of orders through modern motorized methods. The Piqua Company has been shipping large quantities of its own specialty in manila lined straw boards within recent weeks.

New Home for Goldman Paper and Stock Co.

With the removal of the Goldman Paper and Stock Company to its newly purchased home at the northwest corner of 3rd and Wood streets, the firm will be provided with a greatly enlarged converting plant, paper warehouse and sale headquarters, which will enable the expansion of its business. The Goldman company has been established for more than forty years and was founded by Charles Goldman, now retired from the industry and engaged in financial and real estate promotion. His brother and successor, Harry Goldman, who was associated with him, is head of the company, and under his direction the business has been extended since the war to include a complete line of paper merchandise as well as converting. Originally the business was devoted to the sale of paper stock and mill supplies at wholesale. When removal to the new five-story structure is completed by early April, there will be opened one of the most modern converting plants in the city, equipped for converting papers into rolls of all sizes and for slitting into sheets. The Goldman company purchases large consignments in carload lots of paper from mills or distributors and converts these in its own plant. It has developed a wide distribution in all kinds of paper goods including wrapping papers, specialties and fine grades since entering the paper distribution branch of the trade. The new quarters which have been purchased by the firm, are now being reconstructed into a modern paper house, and will be occupied by early April when the present quarters at 414 South Front street, are to be vacated.

Continental-Diamond Fibre Co. Formed

Following the incorporation of the Continental-Diamond Fibre Company the newly issued shares of the company consisting of 145,000 shares, no par capital stock, have been offered to the public by Hayden, Stone & Co., of this city, at $23 per share. The new corporation provides for the merger of the Continental Fibre Company, of Newark, Del., and the Diamond State Fibre Company, of Bridgeport, Pa., near Norristown, both concerns manufacturing fibre products and allied lines. The new corporation was organized to acquire certain of the properties of the Continental Fibre Company and Diamond State Fibre Company and subsidiaries, including the Celoron Company, which for many years has been successfully engaged in the manufacture of Vulcanized Fibre and Laminated Phenolic.

The company reports net sales of $8,709,772 for 1928, against $6,568,861 for 1927. Net income for 1928, after depreciation and Federal tax, was $1,332,048, or $2.96 per share on the 450,000 shares to be outstanding, against $524,779, or $1.17 per share reported for 1927.

New Officers for Brown Instrument Co.

The Brown Instrument Company, manufacturers of pyrometers, thermometers, flow meters, indicating, recording and controlling instruments, of this city, announces the appointment of two vice-presidents, as follows: Charles H. Kerr, vice-president and general manager, and George W. Keller, vice-president and general sales manager.

Fulton Engineering to Open Eastern Office

The Fulton Engineering Company, of Middletown, Ohio, are opening an Eastern office in this city, which will be under the management of Charles F. Black, formerly of the Penberthy Injector Company and long identified with the paper industry.

Changes in Bagley & Sewall Executives

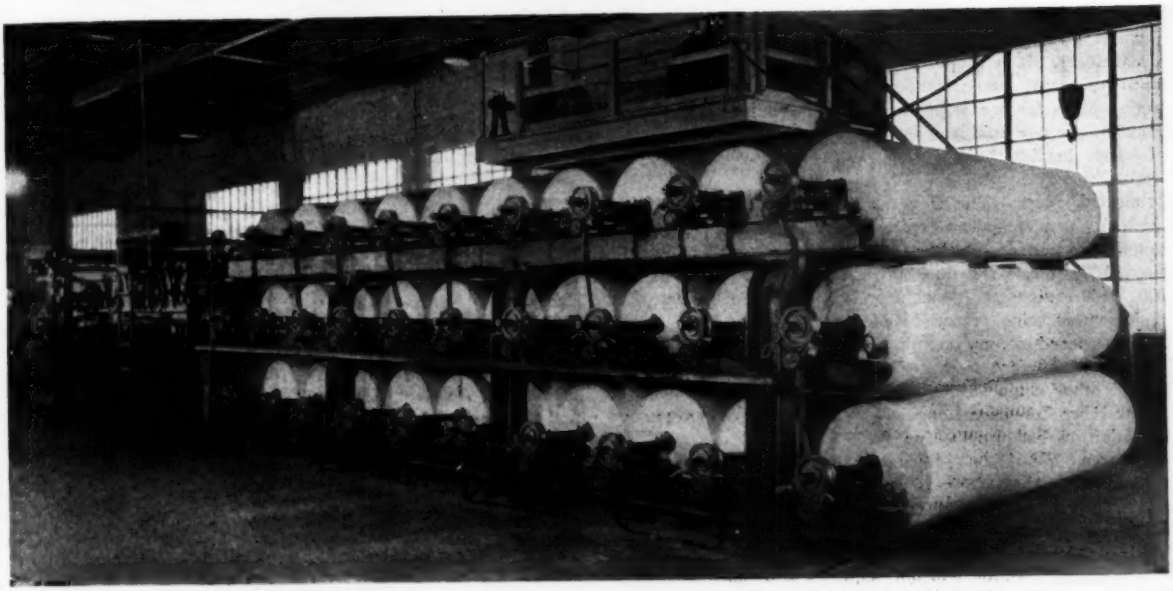
[FROM OUR REGULAR CORRESPONDENT]

WATERTOWN, N. Y. March 25, 1929.—A number of important changes have been effected in the executive force of the Bagley & Sewall Company, which includes the promotion of three of the oldest employees and the retirement of another from active service. Announcement of the reorganization of the staff was made by Charles W. Valentine, president of the firm. In the engineering department Edward E. Martin has been promoted to the position of chief engineer with general supervision of the entire department. He has been connected with the department for the past 34 years during which time he has held the title of chief draftsman. Thomas Lynch has been appointed to the position of foundry superintendent after being in the service of the company for the past twelve years. He succeeds A. G. Trahan, who has retired as active head because of ill health. Mr. Trahan has been a faithful employee for the past 36 years and his departure is the cause of considerable regret among his business associates. He plans, however, to remain with the firm in a consulting capacity. R. F. Dasno who has been with the company for the past twenty years, has been advanced to the position as assistant superintendent of the foundry department.

For Increased Production In Cutter Rooms Use "M&W" Cutters, Lay Boys, Backstands

BUILT TO ENDURE

It's a Moore & White Installation . . . . . .



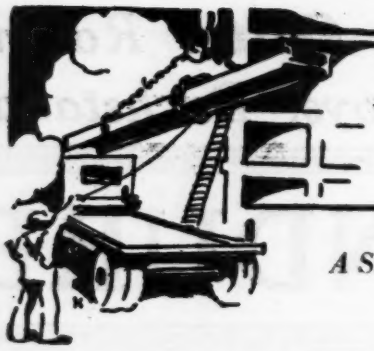
The picture shows Thirty-Roll Backstand used in connection with Moore & White 130" Duplex Cutter and Lay Boy. Cutter equipped with seven pair of Slitters and Lay Boy arranged to lay six piles of paper. Backstand is loaded with thirty rolls of 14 lb. fruit-wrapping paper, each roll weighing 2000 pounds. This is one of three such installations. Name of mill on application.

FIRST CHOICE ALWAYS

(95% of All Paper Mills in U. S. use "M&W" Lay Boys)

Catalog No. 2 on Request

The MOORE & WHITE Co.
PHILADELPHIA, PA.
N. PHILA. STA. PENNA. R.R.
PAPER MILL MACHINERY



CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Priest River, Idaho—The Pacific States Pulp and Paper Company, Aberdeen, Wash., is said to be completing arrangements for construction of new pulp and paper mill at Priest River, where citizens have raised a fund of $50,000, to insure the project. It will consist of several units, estimated to cost close to $1,000,000, with machinery. It is proposed to begin work early in May. A chemical company, name temporarily withheld, is said to be projecting plans for a new plant, on site adjoining the one to be occupied by the new mill, to cost upward of $250,000, with equipment. The chemical unit will be operated in conjunction with pulp mill.

Springfield, Mass.—The General Fibre Box Company, West Springfield, has arranged an expansion and improvement program, to include erection of one-story addition to manufacturing unit, totaling 20,000 square feet floor space, reported to cost more than $75,000, with equipment. Machinery will be motor-driven. List of equipment is being prepared and awards will soon be placed. It is also proposed to construct a one-story storage and distributing building, 75 x 300 feet, to cost more than $90,000, with traveling crane and other equipment. Company was recently acquired by Longview Fibre Company, Longview, Wash., and is being operated as a division of that organization.

Van Buren, Me.—The International Paper Company, 100 East 42nd street, New York, is reported considering construction of new paper mill at Van Buren, consisting of several units, estimated to cost in excess of $2,000,000, with machinery. A power project is also under advisement in that same district. It is understood that actual erection will not begin for a number of months.

Green Bay, Wis.—The Northern Paper Mills, Inc., Day street, has excavations under way for proposed new addition to its mill, to be used largely for pulp storage and distributing service. It will be three-story, 70 x 204 feet, brick and reinforced-concrete, to cost more than $100,000, with equipment. H. W. Gochnauer is plant engineer, in charge. Frank Timmerman is general manager.

Philadelphia, Pa.—The Reyburn Manufacturing Company, 34th street and Allegheny avenue, manufacturer of tags, labels, and kindred paper goods, has asked bids on general contract for a new addition to its mill, to be five-story, steel and concrete, estimated to cost about $375,000, with equipment. Large increase in present capacity will be arranged. LeRoy B. Rothschild, 215 South Broad street, is architect, in charge.

Bellingham, Wash.—The San Juan Pulp Manufacturing Company, Bellingham, Wash., and the Fidalgo Pulp Manufacturing Company, Anacortes, Wash., both heretofore closely associated through like company directorate, are said to have plans maturing for a merger, the consolidation to take the form of a new organization which will acquire both interests. An expansion program, it is reported, will be carried out in connection with the affiliation, including a new pulp mill in the vicinity of Everett, Wash., to cost upward of $300,000, with machinery. Ossian Anderson is president of both companies, and William Morrison, vice-president.

Burnside, Conn.—The mill of Case & Marshall, Inc., in Woodland district, is being remodeled and improved. A number of miscellaneous repairs and alterations are being carried out to the interior to provide for increased working efficiency. Contract for the work has been let to John T. Hayes, Edmund street, Manchester, Conn. Estimated cost has not been announced.

Chicago, Ill.—The Evans Fibre Box Company 3247 West 47th place, has awarded a general building contract to the Vagtborg Construction Company, 251 West 79th street, for proposed new addition to plant, recently announced in these columns. It will be one-story, brick and steel, estimated to cost about $100,000, with equipment. Superstructure will be placed under way at once. A. Epstein, 2001 West Pershing road, Chicago, is architect and engineer. S. R. Van Horne is president.

Macon, Ga.—The Business and property of the Pyntree Paper Company, Macon, has been acquired by new interests, headed by I. Bashinske, Dublin, Ga., and associates. The new owners plan for a general expansion program for increased operations.

Palouse, Wash.—A. L. Maxwell, Palouse, and associates have incorporated a new company to carry out a proposed pulp mill project in this section and plans are maturing for the early erection of the plant. The new company is capitalized at $250,000, and the stockholders will include a number of prominent business interests of Palouse and Moscow. Mr. Maxwell will be president of the company. Option has been taken on a site at Palouse and it is expected to purchase the land at an early date. The new mill will be one-story, brick and steel type, and is estimated to cost about $160,000, with equipment. The initial unit, it is said, will be extended at a later date.

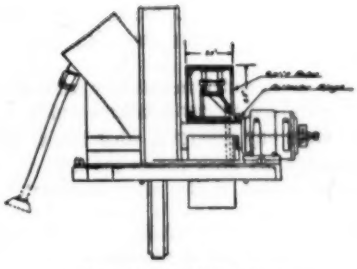
Cleveland, Ohio—The Hospital Specialty Company, 2130 Superior avenue, Cleveland, manufacturer of sanitary paper napkins and kindred products, has purchased the paper napkin branch of the Sauquoit Paper Company, with mill at New Hartford, N. Y. The purchasing company will take immediate possession, and will consolidate with its organization. A general expansion program will be carried out for increased production in this line. Samuel Toder is vice-president and general manager of the purchasing organization.

Milwaukee, Wis.—The American Lace Paper Company, 908 Juneau avenue, is beginning excavations for its proposed new addition on Port Washington road, and will lay foundations at an early date. It will be four-story, 82 x 320 feet, reported to cost in excess of $150,000, with equipment. A contract for stone work has been awarded to the Andres Stone & Marble Company, Milwaukee. Richard Philipp, 405 Broadway, Milwaukee, is architect.

Nashville, Tenn.—The du Pont Cellophane Company, River road, Buffalo, N. Y., manufacturer of transparent wrapping stocks, etc., will proceed by day labor on erection of first unit of proposed new mill at Old Hickory, near Nashville, where tract of land was recently secured. Bids are being asked on different building materials required for the project, which will consist of a group of buildings, reported to cost in excess of $1,500,000, with machinery. The company is a subsidiary of E. I. Du Pont de Nemours & Co., Wilmington, Del. R. D. Moore is engineer in charge of the work.

THE *NEW* 110" CARTHAGE CHIPPER

25 Cords an Hour
with Less Power Input



Cross Section Sketch showing the 110" Carthage Chipper with direct-connected fly-wheel type of motor.

ASTONISHING as it may seem, this 110" Carthage Chipper requires one-third less power when operating at its maximum capacity than is needed to operate Chippers of smaller size and capacity.

The reason for this saving is due to the tremendous inertia developed by the large disc of solid steel which rotates on SKF roller bearings. At a conservative estimate the saving in power due to the bearings alone is at least 15% and usually reaches nearly 25%.

Another outstanding Carthage achievement is the direct-connected fly-wheel type of motor with which this new 110" Chipper can be supplied. This is a feature that is being welcomed by paper mills everywhere because it creates a distinct saving by eliminating waste in belt slippage and transmission.

Write for our free bulletin giving complete information. We also make Chippers in 47", 51", 84" and 88" sizes.

Carthage Machine Company

Manufacturers of Pulp and Paper Mill Machinery

Carthage, N. Y. Belleville, Ont., Can.

New York Trade Jottings

Morgan J. O'Brien, formerly with the William G. Willman Paper Company, has joined the sales forces of the Brainard Paper Company, of 28 Beekman street, New York.

* * *

The New York University *Daily News*, a student publication, is printing for private circulation a rag paper edition suitable for permanent filing. The price of the paper is 25 cents an issue.

* * *

The Manufacturers Paper Company, of 51 East 42nd street, has leased space for executive and sales offices on the fifth floor of the new Chanin Building, 42nd street and Lexington avenue.

* * *

Carlton B. Overton, of Castle & Overton, Inc., paper mill supply dealers, of New York, has been elected chairman of the Foreign Trade Division of the National Association of Waste Material Dealers, Inc.

* * *

E. H. Ingalls, president of Ingalls & Co., board manufacturers, of Castleton-on-Hudson, N. Y., described how binders board is processed in detail at the March meeting of the New York Bookbinders Guild.

* * *

Ake Sahlin, of Billeruds A. B., Seffle, Sweden, sailed from New York on Tuesday aboard the Swedish-American liner *Drottningholm*, bound for Gothenburg. During his visit to this country Mr. Sahlin inspected the leading pulp and paper mills in Wisconsin and Louisiana. He also spent some time in Canada.

* * *

J. B. Post, formerly representative of a large trade journal organization, and Redvers Bowen, have recently been added to the inside force of the Du Pont Cellophane Company. They will be actively engaged in package development and sales promotion work in the Cellophane headquarters at 2 Park avenue, New York City.

* * *

There was an excellent attendance at the regular weekly luncheon and meeting of the Salesmen's Association of the Paper Industry, held at the Canadian Club last Monday. K. W. Jappe, of the Brookmire Economic Service, gave an interesting review of general business conditions, which was greatly appreciated by those present.

* * *

Louis T. Stevenson, of 441 Lexington avenue, New York, has resigned as president of the Rollstone Paper Company, of Fitchburg, Mass. He will, however, continue to handle the sales of the Mountain Mill Company, of Lee, Mass., of which he is president. The Mountain Mill Company is manufacturing a complete line of the highest grades of glassine and grease proof papers.

* * *

The Federal Trade Commission has authorized a trade practice conference for the gypsum industry, which begins today, Thursday, at the Waldorf-Astoria Hotel, New York. Among practices proposed for discussion are: Price discrimination, misrepresentation, secret rebates, and irresponsible and untruthful statements concerning the financial condition of manufacturers or individuals.

* * *

The J. O. Ross Engineering Company has leased a large part of the seventeenth floor of the Chanin Building at 42nd street and Lexington avenue, New York. The space is to be used for executive and sales offices of the Ross company and the executive and sales offices of four subsidiaries of the Ross Industries Corporation. The subsidiaries of the Ross corporation which are to occupy about May 1 quarters in the Chanin Building are: the Nicholas Products Corporation; the Waldron Corporation; the Sadwith-Waldron Corporation and the Ross Engineering Corporation of Canada, Ltd.

Andrews Paper Co. Install Improved Truck

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., March 25, 1929.—The Andrews Paper Company, dealers in kraft and twine and importers of specialties for high grade work in fine papers, located at 54-60 India street, report an increase in their business, which has necessitated the purchase

ANDREWS PAPER CO. SPECIAL TRUCK

of an additional truck for their fleet. The new machine, made by the International Truck Company, is mounted by a specially designed body, built by James O'Connor & Son, Somerville, Mass. The truck has a capacity of three tons.

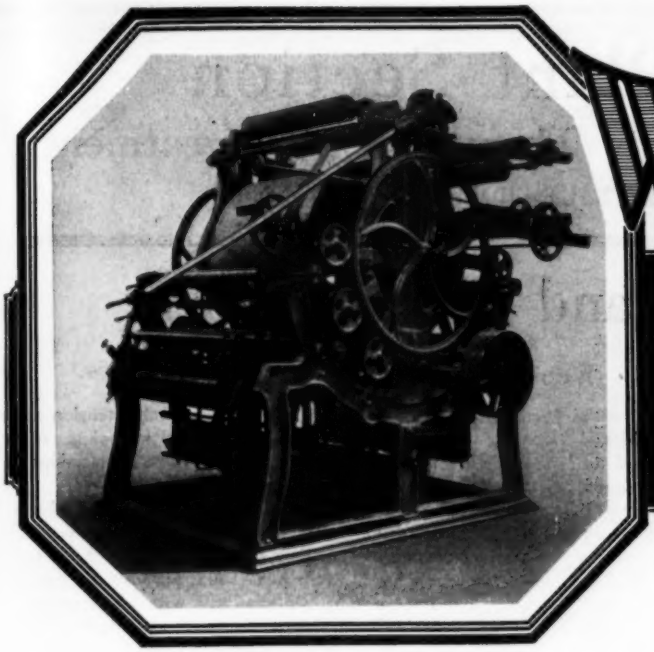
Cooperation Between Workers and Executives

[FROM OUR REGULAR CORRESPONDENT]

GLEN FALLS, N. Y., March 25, 1929.—Many prominent paper mill men of this section attended a meeting of the Foremen's and Executives' Club held during the past week in the Y.M.C.A. rooms at which the principal address was delivered by Charles R. Towson, of New York, who is now associated with the Deering-Milliken Company of that city. Mr. Towson, who is recognized as one of the foremost industrial experts in the country, emphasized the need of loyal co-operation between the worker and department heads as one of the primary necessities to make industrial life worth living. George K. Walker, superintendent of Finch, Pruyn & Co., presided at the gathering. Mr. Towson's speech in part follows:

"Loyal co-operation is essential to quantity and quality production. You and I know some superintendents and foremen who say that it does not make any difference what the worker thinks or his attitude as long as his work passes the test; we pay him only what he earns according to the piece work rates and his state of mind is of no concern. That is an echo of the past. It is the utterance of one who is a liability to modern industry. This attitude never got per capita production either in quantity or quality. On the contrary it causes one of the great losses to industry for while the loss due to the failure to get the maximum per capita production may not be seen it is there. The greatest incentives to quantity production are an adequate wage and friendly personal relations in the plant. This does not mean that workers can be incited to unlimited production for there are those who in a perfectly friendly spirit explain their refusal to follow a pacemaker. The business itself depends for its present profits and future existence upon efficiency in production which is impossible without this unseen thing called loyal co-operation. Remember that the greatest factor in industry is the human being and that the thing in man that affects production most is not the body, not the mind, but the spirit."

The fifth annual meeting of the organization will be held April 18 at which time a slate of officers to be nominated will be presented by the executive committee. G. K. Walker, is the present head of the organization.



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Embossing Machines
Winders and Slitters
Gumming, Waxing and Saturating Equipment
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For Light Weight Papers

Waldron Surface Printers, run in tandem with a Festooning machine and in conjunction with a Rewinder, are Standard equipment for producing the clever decorative effects on light weight papers. For the box paper linings, general utility wraps and trims, from one to six colors is the popular range. In some fields these printers are made for 12 and up to 16 colors.

Accurate registration is assured by assembly of different blocks and color units around a single large impression cylinder with diameter the same as the pitch diameter of the master gear. Sieve cloth color distribution with doctor blade and adjustable tension insure even inking.

Write to Our Engineering Department for Any Information Desired Concerning Surface Printing of Light Weight Papers. No Obligation.

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Pipes and Piping

1—Wooden Pipes

Among the major problems confronting pulp and paper mills is the selection of the most suitable piping for outside mill and underground installations and for use within the confines of the mill proper. For such services, wooden, cast iron and riveted, both steel and iron, pipes are available. These varieties are all used to a considerable extent and each has its advocates among mills whose opinions carry much weight and whose experiences should command attention. Consequently, a discussion dealing with pipes and piping for pulp and paper mill services can be best presented by taking up the various varieties of pipes one at a time, as only by so doing can controversial claims be advanced impartially. Individual articles will serve as briefs, setting forth facts and legitimate claims, subject, as in a court of law, to rebuttal.

Wooden Pipes

The wooden pipes of today are very different, of course, from those turned out by the company organized at the end of the eighteenth century by Aaron Burr to supply the residents of New York with water and which were in service for nearly fifty years, or from those of about equal age which have been dug up quite recently in a perfect state of preservation in Philadelphia, or from the hundred miles of pump logs which served during the early days for the water supply system of Detroit. They are dissimilar also to the wooden pipes in water supply systems even now in service in certain more rural communities and which have rendered trouble-free service for 50, 100 or more years. The modern wooden pipe should possess even greater life, for it not only retains the same lasting qualities of the old wood pipes but it is safeguarded by exterior protection which insures it against deterioration from without, from dampness, acidity or electrolysis. In fact, the life of the wooden pipe of quality today is said to be practically interminable.

As in colonial days, the smaller pipes, *i.e.*, in sizes up to 4 inches or so, are usually bored from solid logs, but in the larger sizes the pipes are made up of carefully dressed assembled staves. For outside mill and underground use, the pipes are customarily built up of well-seasoned white pine or tamarack staves, tongue and groove, machined on all sides and with the inner and outer surfaces dressed to conform to the true curvature of the pipe constructed. The staves are held in place and strength added to the pipe by spirally wrapping the sections of pipe, from end to end, with heavy steel bands under considerable tension and reinforcing the ends of the pipe with a double wrapping. A mortise is made in one end and a tenon at the other, the sections of pipe simply being driven together to form a pipe line.

The outer surface of the banded pipe is covered with a thick coating of asphaltum, rolled in sawdust and then given a second asphaltum coating and another sawdust dressing. Such treatment gives the pipe what is to all intents and purposes an imperishable coating and since wood when saturated with water cannot rot or decompose, the finished product is about as indestructible a pipe in service as can be made. In fact, it is virtually corrosion proof, does not pit, scale or clog and is not affected by electrolysis.

Strength of pipe is an extremely important factor, obviously, and in this connection it is well to appreciate what are the limitations to the use of wooden pipe of standard construction and proportions in both direct pumping service and gravity flow lines. In the former, the maximum pressure should not exceed about 90 pounds per square inch and the customary working pressure should not be any greater than about 40 pounds per square inch. In a gravity flow line, however, in which the pressure is accumulative and built up but slowly, working pressures as high as 130 pounds per square inch have been found to be safe and quite feasible.

Longevity of Wooden Piping

Such strength limitations do not, of course, materially curtail the field for wooden piping in pulp and paper mill services, particularly as the piping is characterized by a number of other qualities which make it particularly suitable for the arduous demands placed on the pipe lines handling the essential supplies of water, pulp, acid and stock without interruption. Chief among these may be the long life and dependability of the piping.

In view of the known long years of service rendered by wooden water supply pipes, it would seem hardly necessary to enlarge on this characteristic, but as the handling of white water, pulp stock, sulphite, etc., introduces difficulties of a more or less special nature the experiences of mills which have used such piping for outside mill and underground installations should be of considerable interest. Such experiences are not so easily ascertained, however, for when all goes well little attention is apt to be paid to equipment and maintenance conditions. Nevertheless, some few

TABLE 1
EXPERIENCES OF PULP AND PAPER MILLS WITH WOODEN PIPING FOR OUTSIDE MILL AND UNDERGROUND INSTALLATION

Mill	Wooden Piping	Experience: Service	Experience: Duration	Remarks
Abitibi Power & Paper Co., Ltd. Sault Ste. Marie, Ontario.	15-in. and 24-in.	Sulphite sewer	11 mos.	Satisfactory service, no evidence of wear.
Escanaba Paper Co. Escanaba, Mich.	16-in. and 48-in.	Stock lines	6 yrs.	Very satisfactory, no evidence of wear.
Hoberg Paper & Fibre Co. Green Bay, Wis.	16-in.	Underground water supply	3 yrs.	Satisfactory service, no evidence of wear.
Little Rapids Pulp Co. Little Rapids, Wis.	10-in.	White water line	3½ yrs.	Satisfactory service, no evidence of wear.
Rondout Paper Mill, Inc. Napanoch, N. Y.	8-in. and 12-in.	Service water supply	1 yr.	Anticipate no difficulty for years to come.
Sherman Paper Co.	8-in. and 12-in.	Ground wood stock	10 yrs.	Satisfactory service, no evidence of wear.

Courtesy: Michigan Pipe Company.

What Price Lubrication?

Between theoretically perfect lubrication and the average lies a wide field paved with wasted dollars.

Texaco Lubrication Service saves these dollars.

In industrial plants of all kinds throughout the world, in the land transportation systems, in marine service and in the great mining plants of the world, Texaco engineers are daily opening the way to better lubrication.

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TABLE 2
COMPARATIVE VELOCITIES IN FEET PER SECOND IN A 16-INCH PIPE, 1,000 FEET LONG, MADE OF DIFFERENT MATERIALS UNDER VARIOUS HEADS

Head in feet.....	1	2	3	4	5	6	Average per cent
Wooden	2.35	3.33	4.07	4.70	5.27	5.76	100.0
Cast iron	2.01	2.84	3.48	4.02	4.50	4.94	85.5
Riveted steel	1.88	2.66	3.27	3.77	4.21	4.62	80.0

Courtesy: Michigan Pipe Company.

of the many mills employing wooden piping have given the matter consideration and have made known their findings as well.

A few brief notes of such order are incorporated in the accompanying table and these can well be taken as being quite typical, the appended remarks being excerpts from official comments. It will be noted that complete satisfaction with the wooden piping is expressed for each one of the diverse services for which it was employed. Furthermore, in not a single instance was any wear apparent at the time the examination was made, which would indicate that in each case the piping still had a long life before it.

A somewhat more comprehensive report has been made by The Beveridge Paper Company of Indianapolis where wooden pipes are employed within the confines of the mill proper as well as for outside mill and underground installations. A little more than a year ago this mill stated that it had equipped its suction and discharge lines for the paper machines and also the beater discharge and overflow lines with wooden piping and that as fast as its other metal pipe lines required replacement they would be replaced by wooden pipes. The reason for this radical move was that the metal pipes in use gave only from three to six months service, while the wooden pipes had already proved good for several years.

The short life of the metal piping was attributed to the severe alum action of the liquids handled. To overcome this, it was deemed necessary to change over to either cast iron or wooden piping and the latter was chosen for economic reasons, as it was very much cheaper, easier to handle and did not require such substantial and costly supporting structures. Commenting upon its experience with wooden pipe line piping, this company also reported that while the metal piping previously used had to be replaced about four times a year, the wooden piping installed some fifteen months previously had not only stood up satisfactorily but when recently examined proved to be in just as good shape as on the day of its installation.

Capacity of Wooden Piping

In such services as enumerated in the foregoing table, as well as in others distinctive to paper mill operation, there appears to be no deterioration or corrosion of the wood and the inner surface of the pipe being and remaining smooth there is no opportunity for the stoppage of any vegetable or animal matter which may be carried by the liquid handled, pulp or other material, so there can be no contamination or discolorization of the liquid passed. This, of course, tends to maintain the capacity of the pipe unimpaired. Tests conducted by the Government demonstrate that wood pipe will convey about 15 per cent more than a 10-year old cast iron pipe, or a new riveted pipe and about 25 per cent more than a cast iron pipe twenty years old, or a riveted pipe ten years old. The action of the conveyed liquid, instead of being destructive to the pipe, is more apt to be beneficial. In any event, no interruption or retardation to the flow can occur, so that for a given discharge, there being no increase in friction, the power requirements remain constant and are considerably less than in the case of a pipe where corrosion has commenced.

The decreased power requirements and the greater capacity of wooden piping is also well brought out in the test data incorporated in the following tables. These values, while advanced by an interested party, a prominent manufacturer of wooden piping, agree closely with the findings recorded in the official Government Bulletin, No. 376, entitled "Flow of Water in Wood Stave Pipe."

TABLE 3
COMPARATIVE DISCHARGE CAPACITIES IN GALLONS PER MINUTE OF A 16-INCH PIPE UNDER VARIOUS HEADS AND MADE OF DIFFERENT MATERIAL

Head in feet.....	1	2	3	4	5	6	Average per cent
Wooden	1,477	2,086	2,552	2,940	3,300	3,615	100.0
Cast iron	1,262	1,782	2,183	2,522	2,821	3,041	85.5
Riveted steel	1,181	1,694	2,050	2,362	2,637	2,396	80.0

Courtesy: Michigan Pipe Company.

Installation Economies

The weight of present day standard wooden piping is quite considerably less than that of riveted steel or iron pipes and only about a fifth to a third as much as that of a corresponding cast iron pipe. This, naturally, makes the handling of the pipe easier and simpler and very substantially augments the speed at which it can be laid. The speed of laying wooden pipes is also rapid by reason of the simplicity of the wood pipe joint, it only being necessary, in assembling a wooden pipe line, to drive the tenon of one pipe section into the mortise of the next. No lead, hemp, calking tools, tapping machines, etc., or skilled labor is entailed in making the joints.

The simplicity of assemblage combined with the light weight of the pipe permits a 20-inch wooden pipe to be laid in a prepared trench for approximately 2 cents per lineal foot. It is claimed, in fact, that it costs only about one-tenth as much to lay a wooden pipe line than it does one made up of cast iron pipes. Due to the non-conductivity of the timber, wooden pipe requires less depth of bury and there is no necessity of extra digging for bell-holes, etc.

The heavy wood staves forming the pipe are a most effective protection against frost, also permitting the use of shallow trenches. This not only minimizes the trench digging and installation costs but does away with any need for expensive trench reinforcements when digging in sandy or boggy soils where the danger of the trench caving in has to be contended with when excavating to any depth.

Protective Characteristics of Wooden Piping

The protective exterior coating of the modern wood pipe even allows the pipes to be laid without trench, exposed to the weather or through swampy country. The insulating protection of the wooden staves and the added protection of the heavy asphaltum outer pipe covering are such safeguards against the weather, in fact, that wooden piping can be laid exposed in the northern states without danger of freezing in the winter. A case in point is at Menasha, Wis., where three main supply lines of the Menasha Paper Company skirt the edge of the pond dam, exposed to the weather summer and winter. One of these lines carries sulphite to the paper mill, another carries pulp stock also to the paper mill and the third carries white water to the pulp mill, yet in the coldest days the supply of these essentials is not interrupted. If metal pipes were employed, exposed likewise to the weather, they would unquestionably freeze up and burst. Even in northern Michigan, at Alpena, and in the woods of central Maine, exposed wooden piping is in use and the lack of any protection does not cause trouble.

Another protective peculiarity of wooden piping is that it will

TABLE 4
STANDARD WOOD PIPING
APPROXIMATE WEIGHT PER LINEAL FOOT

Size Inside Diameter	Pine — Pressure per square inch — 40 lbs.	80 lbs.	120 lbs.	180 lbs.
6-inch	10.5	11.5	11.8	12.5
8	13.7	14.6	14.9	16.2
10	16.8	18.6	19.3	20.4
12	19.9	20.8	21.9	25.2
14	23.1	25.5	26.7	29.9
16	26.7	28.6	32.1	34.9
18	29.8	31.7	35.5	41.3
20	33.4	36.5	40.1	45.3
24	40.9	45.6	55.0	65.0
30	75.0	82.0		
36	90.0	100.0		
48	145.0	160.0		

Courtesy: Michigan Pipe Company.

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Shenango-Penn Roll Covers Shrink On The Spiders Perfectly!

By the Shenango-Penn Method of casting molten bronze and cooling it under centrifugal pressure, the distribution of the internal stresses is absolutely uniform thus permitting a perfectly even grip on the roll shaft when being shrunk on.

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Works at Dover, Ohio and Sharpsville, Pa.

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CENTRIFUGALLY CAST
BRONZE

TABLE 5
EXPERIENCES OF PULP AND PAPER MILLS WITH WOODEN INSIDE PIPING

Mill	Piping	Experience		Remarks
		Service	Duration	
Abitibi Power & Paper Co., Ltd., Smooth Rock Falls, Ont.	6-in. and 12-in. 10, 12, 14 and 16-in.	Pulp stock and white water Water and paper stock	1 yr. 5 yrs.	Satisfactory service, no wear. Satisfactory service, favor pipe.
Bryant Paper Co., Kalamazoo, Mich.	8-in. and 10-in.	Pump discharge to storage tank	2 yrs.	Satisfactory service, no wear.
Crystal Tissue Co., Middletown, Ohio.	16-in.	Stock from beater to chest	10 mos.	Satisfactory service, no wear.
Logan-Long Co., Franklin, Ohio.	6-in. and 8-in.	Paper stock	1 yr.	Satisfactory service, no wear.
Lowe Paper Co., Ridgefield, N. J.	8-in.	Paper stock	1 yr.	Satisfactory service, no wear.
Mohawk Paper Makers, Inc., Cohoes, N. Y.	6-in. and 8-in.	Stock line	3 yrs.	Satisfactory service, no wear.
Northwest Paper Co., The, Cloquet, Minn.	3-in.	White water	1 yr.	Satisfactory service, no wear.
Rex Paper Co., Kalamazoo, Mich.	6, 8, 10, 12 and 16-in.	Stock lines	1 yr.	Satisfactory service.
Rhinelander Paper Co., Rhinelander, Wis.	10-in.	Paper stock	1 yr.	Satisfactory service, no wear.
Smith, Howard, Paper Mills, Ltd., Cornwall, Ont.				

Courtesy: Michigan Pipe Company.

not burst under even considerable excessive pressure and will resist unexpected pulsation caused by the sudden opening of valves or incorrect usage of pumps, where the shock would be very apt to rupture a metal pipe. The wooden staves form an effective cushion of wood fiber and the elasticity of the pipe construction is such an enables it to adjust itself to withstand such sudden strains. Under marked excessive pressure, the pipe staves might be slightly forced apart, it is true, but even should this occur the staves will quickly close back to their natural position as soon as normal pressure conditions are resumed and the pipe itself will not ordinarily be damaged.

Wooden Piping for Interior Mill Service

When employed within the confines of the mill proper, the thick outer protective coating of asphaltum is unnecessary and is quite customarily replaced by a coat of asphaltum or tar base paint. Spruce is usually the wood used in making such piping, instead of pine or tamarack, and the banding a close spiral winding of either galvanized steel or copper wiring. In an approved form, the pipe sections are proportioned so that all the pipe joints are made tenon, and collar flange connections are provided which fit over the tenon ends. Gaskets are inserted between the connecting metal flanges, as a rule, for tightness and to insure that the liquid conveyed cannot come in contact with any metal. These flanges conform to the established standards for such fittings, so sections of wooden pipe can be bolted to equipment and into pipe lines as readily as any other form of piping.

The advantages of this simple and flexible system of inside mill wooden piping need not be enlarged upon, but as in the case of wooden piping for outside mill and underground installations the experiences of a few of the many mills which have adopted wooden pipes for inside mill services at the present time should prove of quite general interest. Attention, consequently, is directed to Table 5, in which are incorporated the findings as reported by such establishments.

As in the listing of experiences with outside mill wooden piping, universal satisfaction seems to have been expressed concerning the behavior of the piping and in not a single instance was any wear or deterioration of piping found. This is a noteworthy record, for in such services as the wooden piping had to contend with it is not at all unusual for metal piping to deteriorate to such an extent in a relatively few months as to necessitate replacement at comparatively frequent intervals. Incidentally, the inside wooden piping in question has only been on the market a few years, so it is quite out of the question to express any opinion as to the life of such pipes. The records to date are certainly good and should justify the attention called to the construction in this discussion, for the advisability of installing such piping should be investigated, at least, by every paper making establishment striving to modernize its mills.

Should advocates of other varieties of piping for either outside or inside mill application take exception to any of the claims advanced for wooden piping, one of the chief aims of these fortnightly discussions will be advanced, as the section strives to serve as a clearing house for information of value to the paper making industry. The hat is in the ring and these columns will welcome the presentation of any and all proper arguments which will render assistance to pulp and paper mills in making selection of the most suitable piping for the many distinctive and exacting requirements of the industry.

College of Forestry Supports Hewitt Bills

"The Hewitt Reforestation Bills should be passed," said Dean Franklin Moon, of the New York State College of Forestry, Syracuse University, who today pledged the unqualified support of the College to the Hewitt measures. At a recent hearing in Albany these proposed laws were endorsed by Louis Marshall and other leading conservationists including the Camp Fire Club of America and the State Commissioner of Conservation.

"The passage of the bills," said Dean Moon, who was one of the original organizers of the movement, "will not only constitute one of the most important measures in State conservation but will set in motion the largest reforestation movement ever launched in this country.

"The need of it appeals to common sense," said the Dean. "Five million acres of idle land in the State and the annual increase in this area of more than 200,000 acres in abandoned farms constitute a great economic menace to the people of New York. The effect this extensive and increasing acreage of idle land has upon the economic situation is shown in many ways," explained the Dean. "The loss of wood-working industries, the jeopardy to the pulp and paper industries, the shifting of taxation from vast abandoned areas to other property that can ill afford the extra burden, the unemployment brought about by all these factors, and the millions of dollars paid in freight bills on imported lumber indicate the far-reaching business mortality that follows in the wake of idle land. The Hewitt plan is the best thus far devised and is based on careful consideration of facts brought out in a state-wide survey during the last year."

Find Rates on Wood Pulp Unreasonable

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., March 20, 1929.—The Interstate Commerce Commission has rendered a decision in the case of the Atlantic Paper and Pulp Corporation against the Savannah & Atlanta Railway Company in which it found that rates on certain shipments of wood pulp, in carloads, moving from Port Wentworth, Ga., directly to Pepperell, Mass., and from Port Wentworth, to Boston and recognized at Boston to Pepperell were unreasonable. The rate charged on certain other carload shipments of the same commodity from Port Wentworth to Boston and reconsigned to Pepperell were found inapplicable and reparation awarded.

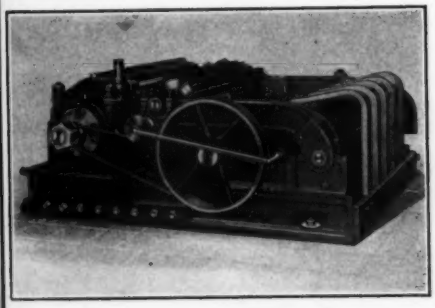
Japanese Papers Expand

WASHINGTON, D. C., March 20, 1929.—Exports of paper and board from Japan during 1928 totaled 89,050 pounds valued at approximately $11,929,922, while imports totaled 50,252 tons valued at $6,666,962. Printing papers, amounting to 55,188 tons, and pasteboard, 15,640 tons, made up the bulk of the exports, while printing paper and wrapping and match papers represented the largest items of imports. Among minor items on the import schedule were imitation parchment paper, 3,614 tons, writing paper, 2,783 tons, and imitation Japanese and tissue papers 2,105 tons.

RYTHER AND PRINGLE COMPANY CARTHAGE N.Y.

RYTHER SHREDDER

DISCHARGING SHREDDED STOCK DIRECTLY INTO BEATER TUB ELIMINATING CONVEYING SYSTEM.



SAVES FURNISH TIME
SAVES BEATING TIME
SAVES POWER

The shredder installation described reduces the return board broke from two machines and also prepares a liner furnish, consisting of groundwood books and papers. The shredder is mounted on an elevated platform and driven by a thirty horse power motor. This setup is able to make a two thousand pound furnish in twenty minutes. Excessive peak loads on the beater drive are eliminated because the stock is delivered into the beater tub in uniformly fine pieces which readily absorb water and are quickly repulped.

Please ask for Bulletin 627

CANADIAN INGERSOLL-RAND COMPANY, LIMITED
10 PHILLIPS SQUARE, MONTREAL, P. Q.

PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

For the Month Ending January 31, and for the Six Months Ending December 31, 1928 as Compared with Corresponding Months of Previous Year

IMPORTS—PAPER

	January				Six Months Ending December 31			
	1928		1929		1927		1928	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Paper and Manufactures (total)	.....	$13,017,337	.....	$13,611,138	.....	$77,762,328	.....	$80,448,567
Printing paper—								
Standard news print.....lbs...free	355,615,380	11,646,701	393,764,440	12,147,619	2,081,138,000	68,858,768	2,245,382,456	71,839,360
Imported from—								
Finland .....lbs.	4,240,412	118,017	5,221,791	134,668	26,619,223	753,769	44,265,185	1,124,685
Germany .....lbs.	1,146,669	33,051	2,525,447	60,581	6,414,525	192,944	9,914,927	271,291
Norway .....lbs.	305,984	8,211	387,731	10,304	16,411,028	441,639	13,084,688	358,856
Sweden .....lbs.	11,262,177	299,265	7,636,989	200,601	65,314,290	1,818,261	62,416,868	1,626,671
Canada .....lbs.	315,766,948	10,446,633	351,845,525	11,013,954	1,829,712,157	61,227,915	1,945,982,739	63,180,366
Newfoundland and Labrador.....lbs.	22,674,818	734,226	26,146,957	727,511	135,574,836	4,390,427	169,649,383	5,375,370
Other countries .....lbs.	218,372	7,298	.....	.....	1,091,941	33,813	68,666	2,121
All other, n. e. s.....lbs...dut.	669,702	29,918	366,189	15,844	5,244,574	252,878	3,371,396	155,181
Grease-proof and waterproof papers....lbs...dut.	51,586	9,053	171,095	31,530	668,919	105,914	715,402	120,978
Kraft wrapping paper.....lbs...dut.	568,111	24,235	866,906	36,551	7,480,384	310,684	7,594,448	325,044
All other wrapping paper.....lbs...dut.	890,660	20,138	480,893	11,915	10,740,168	224,278	7,165,417	200,807
Writing, letter, drawing, etc., papers..lbs...dut.	159,581	40,048	261,366	69,172	1,975,694	542,587	1,680,257	450,383
Surface-coated paper .....lbs...dut.	138,113	71,443	224,682	94,688	1,133,960	475,729	1,267,349	579,880
Tissue, copying, etc., papers.....lbs...dut.	291,494	179,567	327,160	156,569	1,695,675	957,030	2,041,562	1,092,278
Paper boards, n. e. s.—								
Pulp boards in rolls.....lbs...dut.	3,792,839	85,858	4,619,912	109,158	28,716,449	659,153	24,582,276	526,064
Paper boards, pulp board, and card board .....lbs...dut.	2,345,432	58,362	1,841,018	41,590	.....	.....	8,769,961	194,102
Leather board, test, and wall board..lbs...dut.	31,733	1,336	162,750	6,138	15,461,832	341,696	333,646	12,680
Cigarette paper, cigarette books, and covers .....lbs...dut.	1,340,317	317,067	912,472	295,348	6,496,744	1,804,712	5,677,328	1,578,705
Hanging paper (wall paper).....lbs...dut.	209,507	51,641	310,808	78,354	844,929	269,278	883,070	288,094
Duplex decalcomania paper, not printed..lbs...free	46,962	10,846	46,836	10,468	325,899	75,623	284,829	61,781
Paper boxes .....lbs...dut.	.....	147,207	.....	121,033	.....	786,938	.....	918,981
Pulp or papier mâché and manufactures, n. e. s. .....dut.	.....	54,056	.....	115,160	.....	157,246	.....	203,577
All other paper and manufactures.....dut.	.....	215,861	.....	271,001	.....	1,929,814	.....	1,900,672

WOOD PULP

Mechanically ground wood pulp.....tons..free	18,936	446,665	23,064	584,859	120,360	3,081,250	111,091	2,713,582
Sulphite wood pulp.....tons	102,245	5,935,263	106,404	6,230,112	497,793	30,529,399	508,931	30,168,264
Unbleached .....tons..free	78,963	4,146,215	74,031	3,841,744	343,018	18,642,684	346,531	17,808,890
Bleached .....tons..free	23,282	1,789,048	32,373	2,388,368	154,775	11,886,715	162,400	12,359,374
Imported from—								
Finland .....tons	7,614	357,522	10,058	493,896	32,574	1,528,351	44,837	2,099,611
Germany .....tons	3,351	243,815	7,934	526,295	20,442	1,410,572	34,885	2,323,199
Norway .....tons	3,604	244,153	4,510	283,248	33,416	2,406,954	30,003	1,994,859
Sweden .....tons	56,431	3,062,447	50,615	2,847,728	213,266	12,339,113	203,928	11,383,781
Canada .....tons	26,651	1,751,484	30,629	1,925,756	182,353	11,948,243	177,310	11,353,217
Other countries.....tons	4,594	275,842	2,658	153,189	15,742	896,166	17,968	1,013,597
Sulphate wood pulp, unbleached (kraft pulp) .....tons..free	36,019	1,994,334	27,201	1,501,945	195,163	11,467,939	233,505	12,867,593
Imported from—								
Finland .....tons	.....	.....	2,301	114,715	9,050	444,659	13,596	649,436
Norway .....tons	804	41,861	265	33,593	5,785	302,849	8,215	462,612
Sweden .....tons	25,016	1,307,093	14,377	750,514	106,212	5,934,081	136,511	7,166,651
Canada .....tons	10,101	640,786	8,871	556,377	73,213	4,738,566	72,807	4,479,158
Other countries .....tons	98	4,594	1,027	46,746	963	47,784	2,376	109,736
Sulphate wood pulp, bleached.....tons..free	1,168	77,602	855	69,402	2,974	187,564	8,956	546,355
Other pulp .....tons..free	962	68,834	576	42,387	2,385	157,855	4,197	270,771

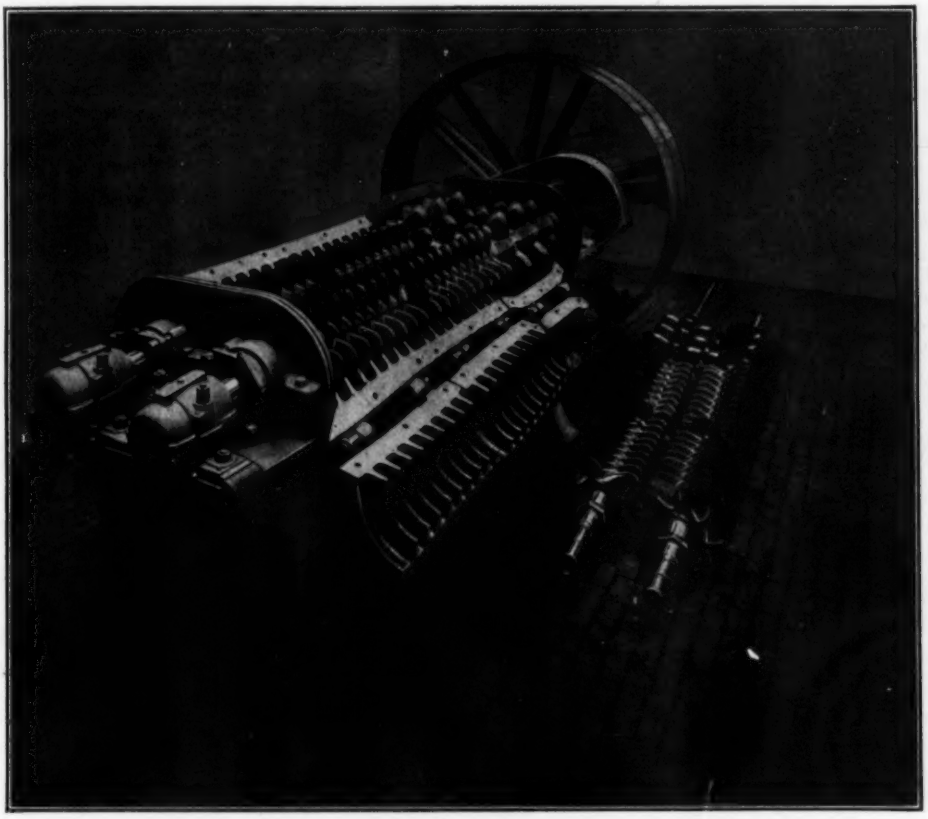
CRUDE PAPER STOCK

Rags for paper stock.....lbs...free	37,631,368	681,540	36,664,383	671,761	202,459,083	3,662,528	229,695,094	4,288,049
Waste bagging, waste paper, etc.....lbs...free	7,936,436	109,053	12,505,554	152,276	64,986,824	831,602	75,824,889	910,864
Old rope and all other paper stock.....lbs...free	5,929,180	129,816	6,840,732	238,995	36,960,246	1,022,316	39,392,019	1,178,878

CHEMICALS AND OTHER PAPER MAKERS' MATERIALS

Colors, dyes, stains, color acids, and color bases, n. e. s. .....lbs...dut.	403,449	492,979	551,275	617,648	2,309,386	2,631,852	3,180,003	3,554,722
Imported from—								
Belgium .....lbs.	8,705	9,707	1,732	2,292	70,659	82,700	43,390	59,632
France .....lbs.	7,506	9,594	3,526	4,578	133,930	157,712	30,892	36,017
Germany .....lbs.	184,422	207,411	367,485	405,065	1,208,569	1,296,472	2,056,919	2,218,954
Italy .....lbs.	12,361	10,143	880	1,234	53,618	61,714	20,253	18,739
Switzerland .....lbs.	131,864	176,713	165,704	192,388	744,637	935,898	877,453	1,063,675
United Kingdom .....lbs.	4,161	4,849	8,014	7,874	51,479	57,002	39,991	40,997
Other countries .....lbs.	54,430	74,562	3,934	4,217	46,494	40,354	111,105	116,708
Casein or lactarene.....lbs...dut.	3,232,488	463,054	2,938,376	335,943	8,439,519	1,201,945	12,947,657	1,595,505
Kaolin, china, and paper clay.....tons..dut.	19,046	180,556	21,693	232,075	152,857	1,466,362	139,985	1,547,299

(Continued on page 54)



"The Voith Kneader is the most valuable piece of apparatus that we have in our beater room"

Extract from a letter just received from the Manager of a well known bond paper mill (name upon request).

Let us show you where the Voith Kneader will fit into your mill to good advantage

American Voith Contact Company, Inc.

280 MADISON AVE. NEW YORK

PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

(*Continued from page 52*)

EXPORTS—PAPER

	January 1928 Quantity	January 1928 Value	January 1929 Quantity	January 1929 Value	Six Months Ending December 31 1927 Quantity	Six Months Ending December 31 1927 Value	Six Months Ending December 31 1928 Quantity	Six Months Ending December 31 1928 Value
Paper and Manufactures (total)	.....	$2,423,310	.....	$3,522,573	.....	$13,076,837	.....	$15,657,656
Printing paper—								
News print paper ..... lbs.	3,001,466	123,759	3,405,360	122,745	9,882,483	490,782	12,306,003	465,577
Exported to—								
Canada ..... lbs.	43,280	2,006	80,508	4,007	1,611,252	98,893	109,733	5,792
Central America ..... lbs.	57,356	2,163	157,660	5,495	461,046	22,825	689,108	24,267
Cuba ..... lbs.	439,302	19,596	353,176	12,558	1,766,350	83,983	1,536,667	57,812
South America ..... lbs.	410,697	16,340	867,138	30,647	2,222,053	100,173	3,168,733	124,304
China, Hong Kong, and Kwantung ... lbs.	83,369	3,364	486,620	16,244	67,880	4,369	2,811,085	104,295
Philippine Islands ..... lbs.	1,898,477	77,151	1,402,048	51,622	2,779,317	126,781	3,130,827	117,010
Other countries ..... lbs.	68,985	3,139	58,210	2,172	974,585	53,758	859,850	32,096
Book paper, not coated ..... lbs.	1,826,128	144,591	4,849,374	318,942	8,176,518	688,598	12,343,451	889,960
Exported to—								
Europe ..... lbs.	23,390	2,214	255,463	19,377	889,765	73,991	312,003	31,929
Canada ..... lbs.	561,421	38,481	1,322,258	76,654	1,585,996	130,637	4,598,396	274,264
Mexico ..... lbs.	47,819	5,252	37,221	3,913	273,213	28,184	252,273	25,383
Cuba ..... lbs.	309,709	23,598	281,837	19,340	1,854,357	152,627	2,360,195	167,335
Argentina ..... lbs.	54,863	7,102	287,982	21,734	472,663	38,227	358,178	29,324
Other South America ..... lbs.	150,925	12,659	146,289	12,458	707,133	73,472	633,439	53,334
China, Hong Kong, and Kwantung ... lbs.	226,856	16,126	1,810,318	108,777	47,529	7,009	877,238	69,646
Philippine Islands ..... lbs.	182,230	12,294	467,881	29,702	1,349,168	90,884	1,541,560	97,569
Australia ..... lbs.	108,333	12,337	93,414	13,695	392,786	37,373	574,141	71,826
Other countries ..... lbs.	160,582	14,528	146,711	13,292	603,908	56,194	836,028	69,350
Cover paper ..... lbs.	166,385	25,844	205,117	37,566	869,201	145,306	938,370	158,546
Grease-proof and waterproof paper ..... lbs.	205,963	31,070	278,237	42,789	1,321,220	197,366	1,620,619	262,521
Overissue newspapers ..... lbs.	.....	.....	12,673,302	150,006	.....	.....	.....	.....
Wrapping paper ..... lbs.	3,746,273	269,607	4,027,026	295,375	16,401,817	1,112,909	18,971,796	1,298,036
Surface-coated paper ..... lbs.	313,851	45,707	1,804,345	170,475	2,355,810	324,434	6,717,684	625,373
Tissue and crepe paper ..... lbs.	400,409	92,303	450,766	101,777	2,759,866	617,854	2,217,979	522,651
Toilet paper ..... lbs.	372,054	44,022	532,487	59,863	2,907,078	335,267	3,688,324	376,103
Paper towels and napkins ..... lbs.	185,282	25,488	294,584	36,681	1,226,310	180,212	1,701,264	231,331
Box board ..... lbs.	3,881,639	120,770	5,686,357	146,623	19,080,355	593,716	23,339,490	628,988
Bristols and bristol board ..... lbs.	104,100	11,540	286,870	25,699	753,158	83,412	991,780	113,482
Other paper board and straw board ..... lbs.	3,443,397	162,945	3,200,115	158,817	16,140,244	810,717	22,638,886	1,176,709
Sheathing and building paper ..... lbs.	1,146,620	42,934	1,581,132	57,904	6,166,914	231,148	8,479,467	311,777
Fiber insulating lath or board ..... sq. ft.	.....	.....	575,077	23,805	.....	.....	.....	.....
Wall board of paper or pulp ..... sq. ft.	3,108,388	104,327	6,360,350	190,066	21,853,559	710,505	35,632,700	1,206,684
Blotting paper ..... lbs.	276,315	32,774	398,069	45,831	1,971,667	217,061	1,823,600	206,487
Filing folders, index cards, and other office forms ..... lbs.	77,499	33,275	128,593	54,472	472,544	171,108	727,499	250,626
Papeteries (fancy writing paper) ..... lbs.	103,696	13,835	39,969	11,383	394,453	107,586	404,532	118,451
Other writing paper ..... lbs.	1,652,022	203,232	3,177,688	326,358	7,355,423	986,939	13,848,780	1,430,813
Paper hangings (wall paper) ..... yds.	4,440,447	71,130	3,847,254	68,180	14,040,917	261,997	13,098,603	248,879
Paper bags ..... lbs.	683,600	60,622	1,070,362	89,622	4,742,942	413,538	4,876,673	404,814
Boxes and cartons ..... lbs.	2,050,048	146,968	2,380,744	159,311	12,259,139	863,738	15,364,868	1,038,491
Envelopes ..... lbs.	187,009	32,269	154,136	27,857	1,198,630	196,355	1,219,692	200,694
Vulcanized fiber sheets, strips, rods, and tubes ..... lbs.	378,360	106,310	576,258	146,566	1,934,253	557,089	2,813,264	729,163
Manufactures of vulcanized and indurated fiber ..... lbs.	16,785	6,377	38,186	12,367	243,970	72,524	183,425	47,979
Cash-register and adding-machine paper ..... lbs.	214,415	23,014	595,365	53,901	1,269,822	121,668	2,113,410	218,413
Other paper and paper products	.....	448,597	.....	587,592	.....	2,585,008	.....	2,495,102
WOOD PULP AND PAPER STOCK								
Sulphite wood pulp ..... tons	1,938	99,364	3,859	191,662	14,972	692,031	12,209	731,680
Soda wood pulp ..... tons	300	25,269	122	10,031	909	78,182	1,259	100,704
Other wood pulp ..... tons	148	8,233	409	34,257	449	23,288	3,987	206,675
Rags and other paper stock ..... lbs.	20,378,353	418,902	11,303,166	183,287	103,176,624	1,584,026	110,670,946	1,783,385
PAPER AND PULP MILL MACHINERY								
Paper and pulp mill machinery ..... lbs.	.....	295,794	.....	285,331	.....	1,579,483	.....	1,363,384

Boston Paper Market Active

BOSTON, Mass., March 25, 1929.—The call for high grade lines of paper continues lively in this market. A number of houses are issuing their new price lists and salesmen find much interest in lines offered.

The demand for coarse paper is good and indications are that April and May will show a satisfactory volume of orders for kraft. It is stated that consumers have been holding off so long that they must come into the market to fill their needs. Values continue firm, with an advancing tendency. It is reported that there is some resistance to prices, but sellers are holding strong to their ideas.

The box board situation is practically unchanged, with prices at the same levels. Some dealers report a quiet demand for the last few weeks.

Old papers continue steady. In bagging, manila rope is firm, with foreign stock quotable at 4.00 to 4.25 and domestic at 4.25. New and old domestic rags and foreign rags remain at the same levels.

An Old Paper Mill Passes

The old paper mill at Dundas, Ont., one of the historic manufacturing establishments of that town, will disappear and on the site will be erected a new high school building. While in operation the mill turned out about six tons daily of manila rope and wrapping papers. Fisher Bros., who donated this property to the Dundas School Board as a site for the new high school, also gave the buildings and what they contained. From the sale of this material the board hopes to derive a profit which will go toward financing the new building. The good material in the frame work of the mill will be used as a filler on the new school. On the eve of the erasure of the mill, citizens of Dundas will see the passing of a once famous industry in the Valley City's industrial life. From the building, now but a land mark, was issued paper of the finest quality and the Gore paper mills, under the direction of the Fisher Bros., reached a peak in Ontario's industry that was hardly equalled. Without doubt one of the oldest paper mills in the Niagara Peninsula, the Gore plant was comparatively a new business in Dundas.

Better Pumps—Better Paper

Of course, it's not literally true that better pumps mean better paper, but most paper mill operators will admit that one of the surest ways to lower the quality of the mill output is to have frequent interruptions and breakdowns.

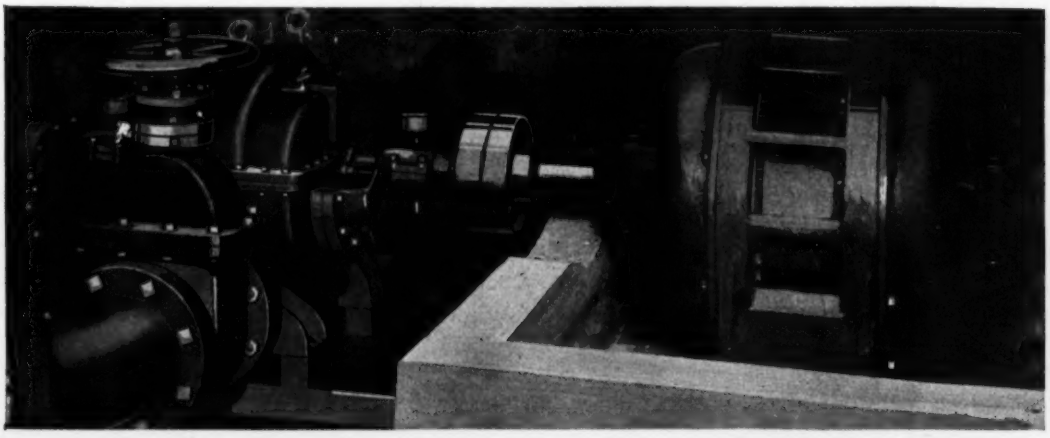
Pumps that cannot be depended upon are pretty likely to give trouble when least desired, and by opposites, good pumps help very much to keep things running smoothly.

We have had such remarkably uniform success with paper mill pumps that we are anxious to refer interested executives to mills where Buffalo pumps are in operation, in many cases handling very difficult jobs. We want you to check our claims of performance with superintendents of plants where the pumps are operating. Why not ask us for details today?

Buffalo Steam Pump Company

383 Broadway **Buffalo, New York**

In Canada: Canadian Blower & Forge Co., Ltd. Kitchener, Ont.



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PAPER EXPORTS SHOW INCREASE

Exports of paper and paper products from the United States during January show a substantial increase in value compared with the previous month and January, 1928, according to the Paper Division of the Department of Commerce.

Shipments of book paper increased considerably over December and show an even greater increase as compared with January a year ago. Wrapping paper exports increased to some extent as compared with both the previous month and January, 1928. There was a rise of 2,078,936 pounds in news print shipments compared with December, and an increase of 403,894 pounds over January, 1928. There was a substantial increase in the exports of box board in comparison with the previous month and January a year ago. A small increase was registered in shipments of other paper board and straw board compared with December, and a slight decrease as compared with January, 1928. Exports of writing paper show an upward trend, January shipments exceeding December's by about 491,385 pounds, and those of January, 1928, by about 1,525,666 pounds.

Shipments of the finer papers and paper specialties showed a slight increase over December. The same applies to these items for January, 1928, with the exception of papeteries which decreased considerably as compared with January a year ago. Exports of boxes and cartons were slightly smaller than during December, and somewhat larger than January, 1928.

Exports of paper and paper products during January were valued at $3,522,573, as compared with $2,697,188 during December, and $2,423,310 in January, 1928.

Imports of paper and paper products into the United States during January, 1929, amounted to $13,611,138, as compared with $14,459,838 in December, and $13,017,337 in January, 1928.

Imports of standard news print were 393,764,440 pounds in January, 415,453,542 pounds in December, and 355,615,380 pounds in January, 1928. Incoming shipments of other paper and paper products show a slight increase in value as compared with December, 1928, and January, a year ago.

Total paper and board imports during January were valued at $13,611,138, of which $12,147,619 represented 393,764,440 pounds of news print paper and $271,001 other paper and board receipts.

Statistics covering receipts of paper base stocks in comparison with December figures show a slight increase in the volume of pulpwood receipts and a slight decrease in the receipts of old rope and all other paper stock and a slight increase in waste bagging, waste paper, etc. Rags for paper stock show an increase over the preceding month. Incoming shipments of wood pulp show a tonnage of 158,100 as compared with 187,058 tons in December, and 159,330 tons in January, 1928.

The total value of paper base stocks during January is given as $10,522,314, as against $11,645,385 in December and $10,608,863 in January, 1928.

CELLULOSE RESEARCH

In an address made recently Prof. Harold Hibbert, head of the cellulose chemistry department of McGill University, declared that many new developments would occur in the next few years from the progress recently made and now being made in cellulose research.

Among those which he prophesied would take place are the manufacture of celanese silk from wood pulp which in the past has always been made from cotton linters; new developments in the manufacture of plants and lacquers; the establishment of pyroxylin lacquer manufacturing in Canada and development in manufacture of explosives used in construction work.

He declared that the problem of over-production in the pulp and paper industry would probably be settled by the research chemist. In speaking about the progress already made in the improvement and adaptation of wood pulp for use in the textile industry Professor Hibbert stated that the main part of the work being carried on by the institute at the present time was in anticipation of increased production of sulphite pulp at a lower cost.

"The studies" he said "now looking towards methods for raising the quality and decreasing the cost of production of sulphite pulp have made considerable progress. It is considered that the time cannot be far distant when it will be possible to transfer some of the scientific ideas to production. The results obtained warrant the belief that more scientific extension should be possible for the industry."

In regard to the strides that the pulp and paper industry has made in the direction of the textile industry he pointed out that the bulk of pulp now used in rayon production is being imported from Canada. Rayon production, he claims, has increased from year to year sometimes gaining as much as from 75 to 100 per cent in twelve months. The country it is expected will soon share in the benefits of the latest work of the research chemist for not only can wood pulp be used in making rayon silk but it can also be used for other types such as celanese silk.

"While hitherto it has been necessary to make celanese silk from cotton," he said, "recent developments indicate that an equally satisfactory product may now be made wholly or in a great part from sulphite pulp. Again, wood pulp will have a greater demand in the production of celluloses now used in the making of paint and varnish for in new developments in these industries celluloses are required and these in turn can be made from wood pulp."

Other researches now being carried on under the direction of Professor Hibbert are bringing to light new outlets for the huge supply of cellulose available in the North Country forests.

Swedish Pulp and Paper Market Steady

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., March 27, 1929.—The year 1928 closed with a feeling of general confidence in the Sweedish pulp and paper industry, notwithstanding a number of adverse factors with which the manufacturers had to contend, according to the Department of Commerce.

Production—and, consequntly, exports—were reduced somewhat by the labor troubles in the early months of the year, but these losses were made up to a great extent after the mills resumed operations. Exports of mechanically ground wood, amounting to 278,218 metric tons (metric ton=2,205 pounds). were actually 7 per cent above those of the previous year, and of boards amounting to 36,598 tons, 12 per cent above 1927.

Exports of chemical pulp, however, decreased—sulphite by 17 per cent and sulphate by 4 per cent. Paper shipments also were lower, news print having decreased from 171,726 tons to 159,878 tons and other classes of paper from 211,733 tons to 205,226 tons.

The decrease in production of the most important grades during the lockout amounted to 17,000 tons for heavy wrappings, 13,000 tons for sulphite wrappings, 4,500 tons for greaseproof paper, 4,000 tons for fine papers, and 32,000 tons for news and other printings, according to estimates published by the Svensk Paperstidning.

Swedish wrapping paper manufacturers, on the whole, had most cause to feel satisfied at the end of 1928. Except for a short time during the labor disturbances, these mills operated at capacity, while the reduction in output as a consequence of the lockout had a tendency to stiffen prices. Kraft paper manufacturers in particular found a good demand for their product, owing to the increased consumption of kraft paper in the manufacture of bags in the cement industry. The demand for grease-proof paper has also been steady and prices have continued firm, the tendency being to increase rather than fall.

Conditions in the news print market have been less satisfactory. The Swedish industry has been unfavorably influenced by the enormous increase in Canadian production during the past few years, with the resultant decline in prices. Furthermore, the preferential tariff treatment granted Canadian news print in British dominions has tended to reduce purchases of other than Canadian, or British, news print, while German deliveries on reparations to France have also curtailed exports to one of the most important continental markets.

There was no improvement in the fine paper market during 1928. Prices continue low, the domestic consumers seeming inclined to turn to the cheaper papers, while in foreign markets keen competition is encountered from the central European countries.

No Demand for Increased Wages

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., March 25, 1929.—Officials of the International Brotherhood of Papermakers returned this week from the biennial convention held at Montreal and it was announced by William H. Smith, president, that there will be no demand made this spring for increased wages in paper mills of this country and Canada. Although many resolutions were received from various locals during the recent convention asking wage increases it was voted to continue with the present scale which means that the existing rates will continue for another year at least. It was learned, however, that members of the pulp workers' union are seeking certain adjustments calling for a higher scale. In case of any mill consenting to the adoption of a five day week schedule, which is advocated by the Brotherhood, the owner of the mill will be asked to grant a twenty per cent increase in the wages of men employed. If this adjustment is granted it will result in these men receiving the same wages for a five day week as they now do for a six day week.

The majority of the present wage and working agreements between paper mill manufacturers and the papermakers' union will expire on May 1 and it is understood that all will be renewed. J. P. Burke, head of the pulp workers' union, is scheduled to arrive in this city early next week to confer with officials of the Brotherhood in arranging for an itinerary that will prevail during the next few weeks when representatives of the two unions will meet with representatives of companies where existing wage and working agreements expire. It was also stated that locals throughout this country and Canada will be called upon during the next six or eight weeks to express themselves in a referendum on a number of matters including several changes in the election laws. There will also be a proposition submitted at the referendum increasing the salary of the secretary from $3,000 to $4,000 a year. This proposition was submitted a year ago and was defeated by a few votes. A proposition will also be submitted requiring delegates to the A. F. of L. Convention and the Dominion Trades and Labor Congress to be citizens of their respective countries. A proposition will also be submitted adding two more holidays, these being Memorial Day and Thanksgiving Day. At the present time the papermakers have four holidays during the year which are New Year's Day, Fourth of July, Labor Day and Christmas.

Union Bag 1928 Net Loss $150,413

The Union Bag and Paper Corporation reports for the year ended Dec. 31, 1928, consolidated net loss of $150,413, after all charges as compared with net loss of $634,962, in the preceding year.

In his remarks to stockholders C. R. McMillen, president, said in part:

"The volume of sales in 1928 was greater than in 1927, but competition forced the price received for these products to a figure 7 percent lower than for 1927. Nevertheless your company made a small operating profit for the year; a reduction was made in the loans from banks; inventories were reduced and there was only a small change in the ratio of current assets to current liabilities.

"As referred to in last year's report, a new kraft pulp mill of 40,000 tons annual capacity, generally considered the most efficent of its kind in existence, has been built by your company during the past year at Tacoma, Wash., and is now in operation. In addition all of the paper mills have now been remodeled to make kraft paper and late in the year two new bag factories were completed at more distant points—Vancouver, Wash., and Orange, Tex.—for the purpose of reducing freight costs and for affording better service to our customers in these localities.

"Construction of the Tacoma mill started in January, 1928, and therefore it did not come into production during that year. This made it necessary for the company to continue to purchase its entire pulp requirements for 1928 at prevailing market prices which were materially higher in cost than the production costs in the new mill will be in 1929.

"As a result of these and other improvements your company is now in a more satisfactory condition as to production costs and new product possibilities."

Pulp Curtailment at Helsingfors

At the Wood Pulp Conference held in Helsingfors during the latter part of January, it was decided to leave the question of curtailment of producing in 1929 to each country concerned, as it was not possible to set a standard rate for production for any length of time. Last year there was a reduction in output of 25 per cent, and for the time being there is little likelihood of an increase in the production of ground wood. Exports during 1928, according to preliminary figures amounted to 263,000 tons for Norway, 273,000 tons for Sweden, and 138,000 tons for Finland, a total of 679,000 tons, dry weight.

Events of 1909

The first pound of Liquid Chlorine produced in the U. S. A. 1907

EBG

Inauguration of Pres. Taft, March 4, 1909

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Section of the
Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Edited by
RONALD G. MACDONALD, Secretary

To Revamp or Rebuild *

By B. M. Owen and R. B. Elliott[1]

With the rapid development and expansion of the news print industry in Canada of recent years, executives and engineers of some of the older mills have come to realize that, while the power and steam costs represent but a comparatively small percentage of the total cost of the final product, the annual cost of these items amounts to a large sum, and that the possibility of a fair return from investment in modern plant is practically assured. Many schemes, systems, and devices have been offered for the reduction of these costs, and that many of these have merit is beyond question; but in almost every instance, only a part, rather than the whole, problem of improvement is dealt with. It is thought, therefore, that a study of the major phases of a typical problem, during which most of the important and widely variable factors would be considered, would be of some assistance to those interested in the reduction of steam cost, or who may have to make such a decision as the title of this paper indicates.

It is repeatedly stated that, due to the presence of so many variables, each case must be separately treated; to an extent this is true; but, on the other hand, it is also a little confusing, or even misleading, to those operators who so often read "differently" for "separately." It will be as well, therefore, to state at once that in solving any problem of this nature, the same factors appear, although their relative value and position in the problem may differ very widely. Practically every engineer can handle the mathematics of these problems with reasonable skill, but this ability is not evidence of similar ability in the reasoning that must precede the layout of equations that correctly include all the conditions. Essentially, then, much depends on the recognition, collection, and setting down of only the relevant data, in order that there should be a minimum of confusion and to avoid wasted time in the study of unessential detail.

It is well to remember, however, that since the generation and use of steam is merely a part of the complete manufacturing process, its costs being incorporated in the final product, it would be fallacious to consider changes to the arrangements without due regard to the effect such changes may have on other parts of the process. For this reason at least, all power sources should be considered conjointly. One other important consideration is the "use factor," which should never be forgotten in the final analysis of the studies. There have been many well conceived plants which, after being put into productive operation, have been condemned for failing to reach expected economies. Investigation has shown that estimates had been based on a 100 per cent "use factor," and, due to changes in market conditions, this factor had fallen considerably, with the natural result that economies were lessened, or had entirely disappeared.

To avoid confusion and to keep within the scope of this paper, it is not proposed to treat every detail of news print production; to instance, however, how closely interdependent each part of the process is with the whole it may be permissible to quote one illustration.

It is often found necessary for a variety of reasons to change from an "all slush" method of handling ground wood to one using a proportion of laps. This may be brought about by periodic change in power-supply conditions; and, in such a case, it will be appreciated that the additional power required for repulping may be required at a time when such additional power is not avail-

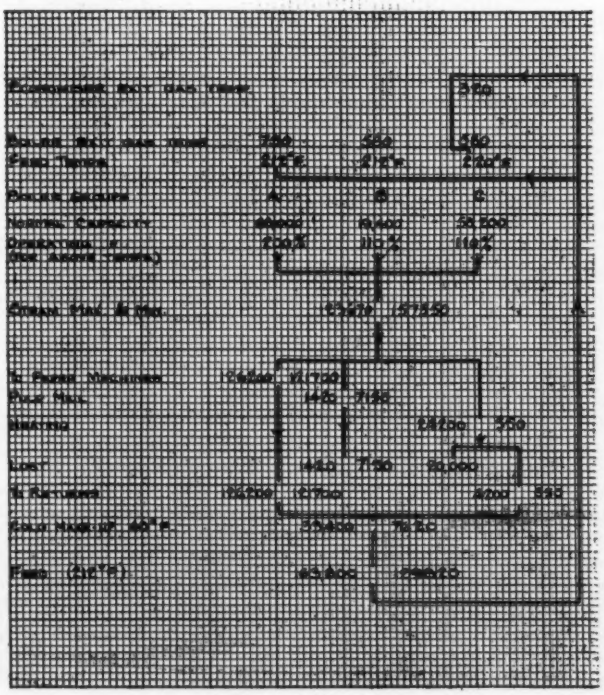

FIG. 1

* Paper presented at the annual meeting of the Technical Section of the Canadian Pulp & Paper Association, Montreal, January 22-25, 1929.
[1] Babcock & Wilcox and Goldie McCullough Co.

able. Such would be the case where power is derived from, say, a hydro development dependent on water regulation, with a second source from power generated from steam exhausting to process, since the power in the latter case would be regulated by process and low-pressure steam requirements, which are usually at a minimum at the same periods that water flow is low. It will be seen that considerable combined study is necessary to maintain a balance that will show the best average economy. Thus, in any event, before final decisions are made, very complete consultation should be made with those concerned with all other parts of the process.

A Typical Example

For the purpose of the study, consider a news print mill of 98,000 tons per year normal capacity, the ground wood requirements being produced by hydraulic and electric grinders, the sulphite being purchased and repulped. Paper machines being steam-engine driven, exhausts go to the process; pumping and other equipment except that mentioned above being electrically driven. The steam plant consists of several water-tube boilers, stoker fired, having a combined normal capacity of 144,900 pounds steam per hour at 165 pound gauge pressure, no superheat. The boilers are divided into three groups: "A" being the more modern and having a combined steaming capacity of 67,600 pounds steam per hour; "B" 19,300 pounds per hour; and "C" 58,000 pounds per hour.

Group "A" exit gas temperature on average loading is 750 deg. F., this being entirely lost to stack. "B" exit gas at 580 deg. F., also goes direct to stack, while "C" exit gas is passed through an economizer common to the group, from which exit gas is 320 deg. F. Since these exit gas temperatures may be taken as indicative of the efficiencies of the various groups, it will be obvious that group "A" would most likely offer the best returns for any capital expenditure on improvement.

To provide for the given yearly output of news print, over 1,086 million pounds of steam is generated, the cost per 1,000 pounds being approximately 44.8 cents, of which 36.3 cents is absorbed for fuel. The distribution of steam is given in Fig. 1. The maximum and minimum hourly demands over the year are shown, together with gas and feed temperatures. It will be noted that feed temperatures are generally good. Cold "make up," however, could possibly be reduced; but since this is a minor economy, it will not be dealt with here. The average present steam requirements by the month are given in Fig. 2.

Since it is desirous that other power sources should be considered, it will be necessary to describe electric power arrangements. The hydro development of 5,000 kva., together with the hydraulic power for the grinders, is subject to the same water-flow regulation; the latter is such that seasonable shortages occur, and during these periods, a reduction is made to the hydro-electric output in order to provide sufficient water to maintain the hydraulic grinders at maximum capacity, or in other words, to maintain a high "all slush" basis for the ground wood pulp requirements of the paper mill. To make up this power shortage, a contract exists for a supply of power from outside, the contract being in two parts: the first part covers 3,000 hp. continuous at $27.50 per horsepower-year; and the second part, a supply up to 3,000 hp. as and when required, at $25.00 per horsepower-year for the amount used. It is to be assumed that this contract has only a short lease, and that while renewal is doubtful, at all events an increase in price is likely to be demanded.

The total electrical power requirements of the mill are shown in Fig. 2A. This chart shows the totals of hydraulic, electric, and purchased power. The river flow is also given, from which the hydraulic and generated electrical power is derived, the purchased power making up the shortage from total of both required. The values represent an average over each month. It will be noticed from the location of the blocks of power in the three combinations given that the blocks generated from the new source steam do not replace an equal amount of purchased current. This is explained by the fact that the river flow is influenced by the pur-

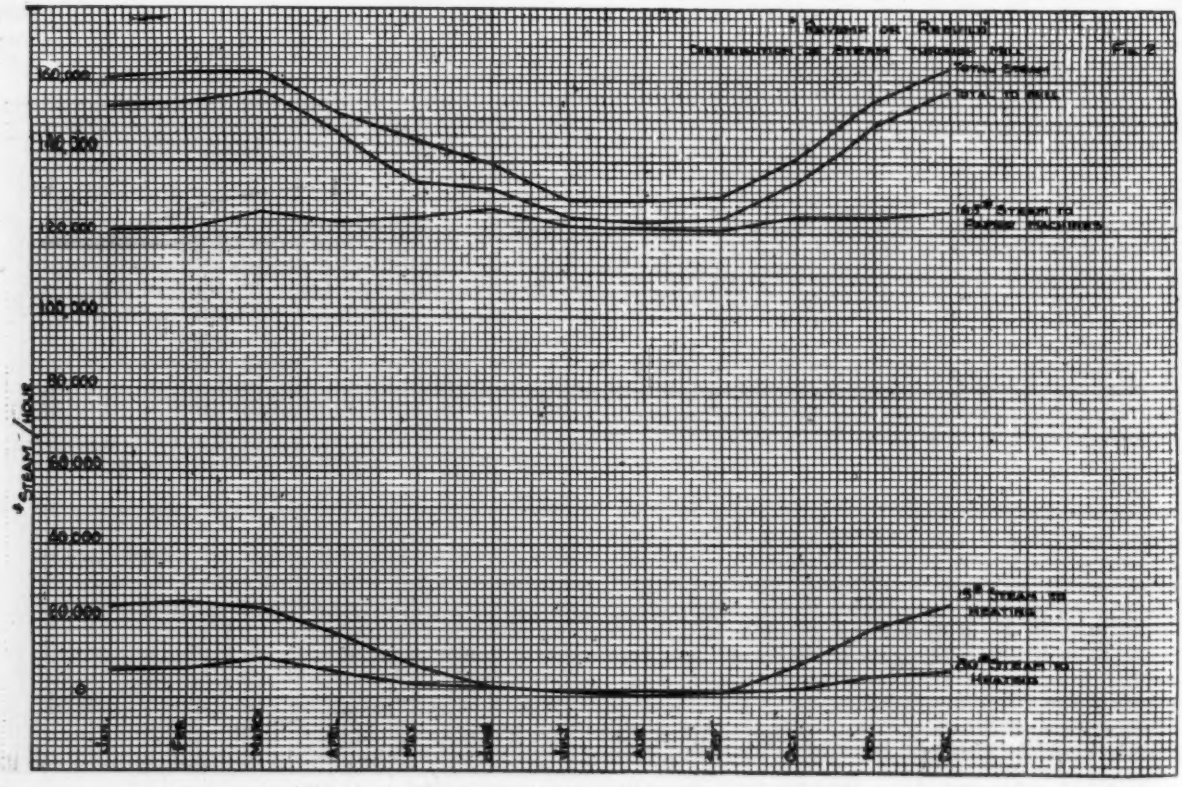

FIG. 2

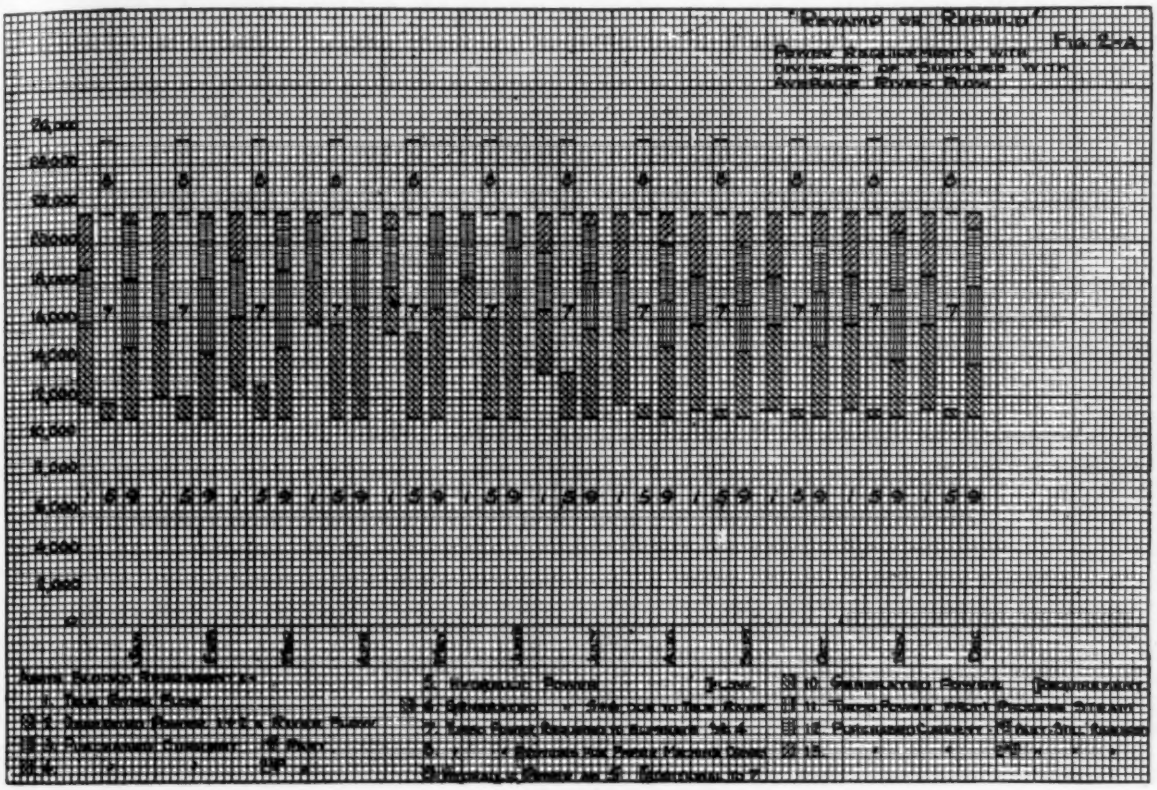

FIG. 2A

chased current, since the latter is generated on the same water source up-stream; in other words, due to the difference in effective head at the development producing purchased power and that owned by the mill, the additional water released by the purchase of power does not produce as much power at the lower development. The difference is allowed for in the relocations of the various blocks of power in columns 2 and 3. (N. B.—Unhatched blocks are numbered.)

The question arises here: (a) whether the produced surplus of ground wood during high-power periods would balance with shortages during low-power periods; and (b) whether, with due consideration to the economy of the "all slush" method, the power shortage could be made up by power to be developed by the use of a high-pressure steam plant. Before proceeding with this, however, it will first be necessary to investigate the possible economies in steam generation by the existing plant. For comparison's sake all estimates and calculations in this connection will be based on a coal of the following proximate analysis:

Volatile	14.46 per cent
Fixed carbon	71.73 per cent
Ash	10.07 per cent
Moisture	3.74 per cent
B.t.u.	13,450
Fusion temperature ash	2200 deg./2400 deg. F.

The average efficiency of the boiler plant approximates 72.2 per cent, using total coal and total steam, and the variation from this value by the groups would be approximately: "A," 71 per cent; "B," 73.5 per cent; and "C," 75.5 per cent, using gas exit temperatures as indications. It must be understood that this is not exact figuring, but it will suffice to indicate the course for the studies to take. By reason of the low efficiency of the largest group "A," a recovery by means of air heater, economizer, or both will be considered. Whether air heater or economizer or a division of surface between them should be made, is a question that has led to considerable discussion, and even yet there are engineers who are not in entire agreement as to the best arrangement for given problems. There are, however, clearly defined limitations, which may be enumerated as follows:

(a) Furnace temperature, with due regard to the type of wall construction, boiler rating, and heat release.

(b) Fusion temperature of the ash.

(c) Dew point of exit gas with regard to draft conditions.

(d) Permissible maximum temperature of feed (economizer outlet temperature).

(e) The economical limits.

The above may be taken as major factors. There are many minor factors, which have various degrees of bearing, but they may all be considered placed under those mentioned above. To deal with them all separately would lead to confusion in a paper of this nature.

Item A.—The walls are of solid construction, and the boilers are set in a battery. The safe hot-face temperature of the brick is taken at 2,600 deg F. This temperature may also be safely assumed to be the furnace temperature, so far as the safety of the walls is concerned. The maximum furnace temperature, however, would very likely be above this value.

Item B.—This item, however, must also be considered, since it is generally conceded that best furnace conditions obtain when furnace walls are at a temperature corresponding to the fusion temperature of the ash; and when temperatures above this prevail, then high upkeep charges follow; and when below, combustion efficiency is impaired, with consequent higher fuel charges. Since the fusion temperature of the ash is at 2,200 deg./2,400 deg. F., it will be well to maintain the hot-face temperature of the wall at, say 100 deg. F. below this value, or at 2,300 deg. F. An examination of the conductivity of the walls shows that this figure obtains. If, on the other hand, serious discrepancies had occurred, then wall reconstruction, with regard to structural

strength and conductivity, or changing the fuel for one of higher ash-fusion temperature would have produced the desired result. To digress fror a moment, it is believed that if more attention were given to this point by operators there is no question that furnace upkeep would be reduced.

Item C.—It will be readily understood that by keeping below the temperature at which condensation takes place, complications such as corrosion will be avoided. The value of this figure had better be set well above the actual dew point, and will be taken in this case at 220 deg. F.

Item D.—This deals with economizer-outlet temperature; and in order that the difficulties and dangers that arise when "steaming" is allowed may be avoided, also to provide a margin for periods that often occur due to feed regulation when temperature may rise, it is well to set this value at say 50 deg. F. below the temperature due to working steam pressure of the boiler.

Item E.—Having arrived at the above limits, the economical aspect may be considered. Will it pay to install an air heater, or other surface sufficient to reduce the final gas temperature to the limit? Would the resulting return of heat to the furnace in the case of air heater raise the furnace temperature above that permissible, or in the case of economizer, raise the feed temperature over the safe limit? Even if it be found that either (a) or (b) limitations are not exceeded, there is still the question of how far the heat recovery may be taken, with due regard to reasonable return from the investmnt involved.

In order to ascertain the safe and economical amounts of heating surface that may be used after the boiler, the performances of varying amounts, first of economizer, then of air heater, and finally a combination of both surfaces, will be plotted over the annual carrying charges. These graphs will show the various limitations, and also, the point at which changes must be made from one form to the other where further heat recovery is desirable.

Fig. 3 begins with the economizer sufficiently large to reduce boiler exit-gas to the minimum temperature permissible, i.e., limit (c). It is clearly shown that due to limit (d), complete recovery cannot be made by economizer above. Fig. 4 deals in the same manner with air heater surface. The limit here would be on air-outlet temperature; and since in this case stokers have to be considered, it would be inadvisable to permit a higher value than 400 deg. F.

Comparing 3 and 4, the air heater, from the fact of lower investment charges, is the more profitable investment; however, in neither 3 nor 4 is it possible to reach the lowest permissible exit-gas temperature, but a combination of both forms would; so, estimating a combination, the results are plotted in Fig. 5. Here it will be seen that a very complete return of heat will obtain with reasonable return on investment. These graphs are purely estimates, and should not be used for any purpose other than to indicate the characteristics of the two forms of heat-recovery surface. It will be readily appreciated that fuel costs are a major consideration when considering such installations from an economy viewpoint. Thus, with very low priced fuel the return on investment would finally reach a value below what might be termed profitable investment.

From the foregoing, it should be obvious that the division of heating surface between economizer and air heater depends on the relative values of furnace temperature, boiler exit-gas temperature, water temperature, corresponding to the steam working pressure, and the economical limit to which exit-gas temperature may be reduced. Further reasoning will show that above certain furnace temperatures, some cooling to walls becomes necessary, such temperatures varying with the ash fusion point. High ratings and high steam pressures, with consequent higher exit-gas temperature from boilers, usually carries studies into the realms of the division of heat-recovery surface. It is believed, that, in any case, the limiting factors should be fixed, in order that studies may be directed to the correct solution.

Leaving the figuring of economies from the use of air heater and economizer on group A boilers for the moment, it logically

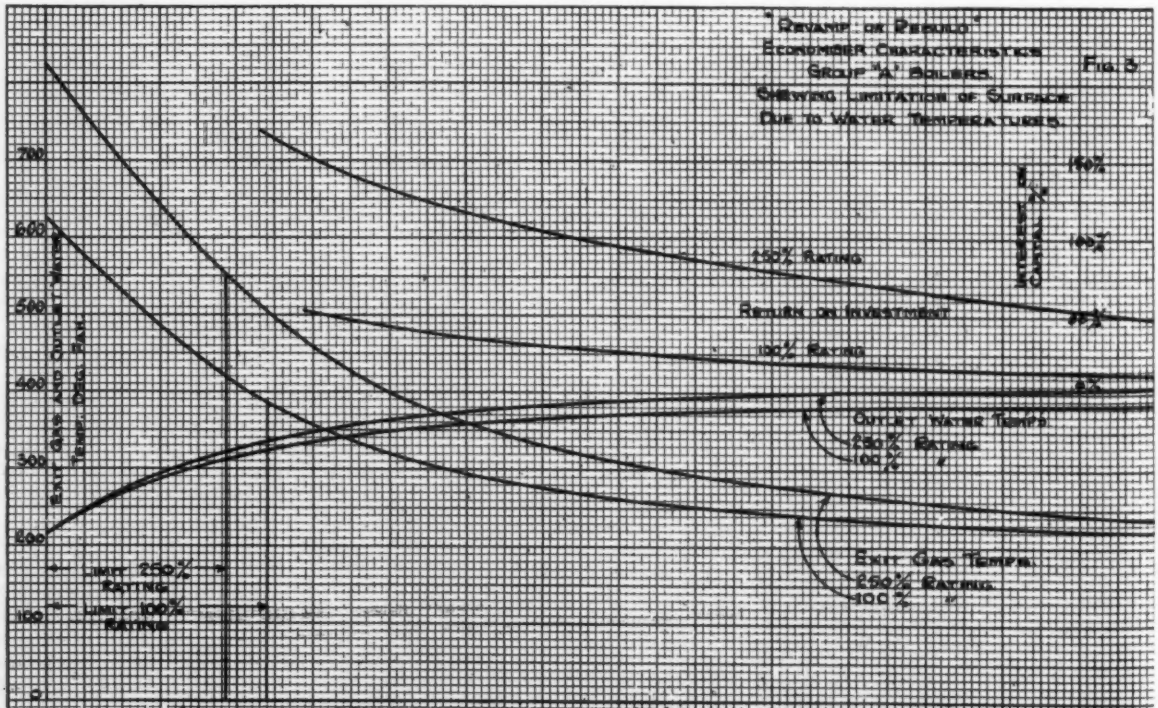

Fig. 3

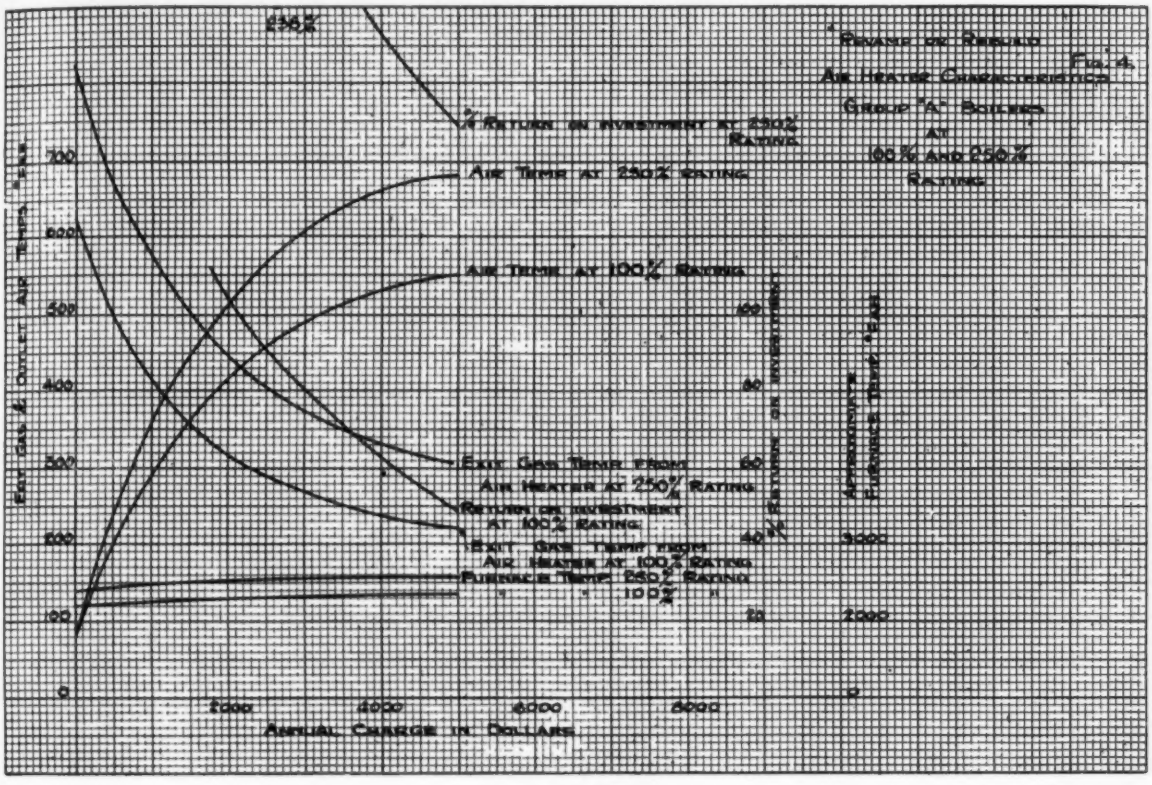
Fig. 4.
Revamp or Rebuild
Air Heater Characteristics
Group "A" Boilers
at
65% and 250% Rating
% Return on Investment at 250% Rating
Air Temp at 250% Rating
Air Temp at 100% Rating
Exit Gas Temp from Air Heater at 250% Rating
Return on Investment at 100% Rating
Exit Gas Temp from Air Heater at 100% Rating
Furnace Temp 250% Rating
Furnace Temp 100% Rating
Annual Charge in Dollars

Fig. 4

follows that the next consideration should be the raising of output on the largest boilers (A and B) of group A, so they may be operated continuously as a base-load group. From the previous studies, it will be seen that to increase the output beyond the values to which they were then carried would mean the introduction of some means of cooling the furnace walls, as well as additional heat-recovery surface to deal with the higher exit-gas values. Figuring a rating of 300 per cent, 84,000 pounds of steam would be generated; and by inspection of the steam demand curve in Fig. 2, it will be noted that this volume may be safely accepted as a suitable value.

In order to decide on the cooling surface necessary in the furnace, it is essential to fix on a maximum furnace temperature. This will be taken at 2,600 deg. F., the fusion temperature of the ash remains as before 2,200 deg./2,400 deg. F., so that the walls must be cooled below this figure. Since the boilers are set in a battery, some difficulty would arise in cooling the center wall. In order to obviate trouble here, also to simplify the design of the furnace, the boilers will be altered to form one unit over a common furnace, the center wall being removed.

A new firing system will now be required; and space considerations, together with the desirability of having more latitude in the purchase of coal; only pulverized fuel will be considered. The furnace will be proportioned to the correct heat release. To accomplish the cooling of the furnace, several means are available; in this case, however, only one will be considered—water cooling In the choice of system to be adopted, every attention must be given the important factors of combustion efficiency, and furnace maintenance; and, as mentioned above, it is most desirable to maintain the temperatures at or slightly below the ash-fusion point. It will be well, therefore, to consider a method which will produce the desired results.

Having completed the examination of the existing boiler plant for possible major economies, the cost of alterations covering such changes as are indicated may be figured.

Case 1.—Installation of economizer and air heater on group A.

Present fuel cost per 1,000 lb. of steam, from group "A" taken at 36.3 cents and 4,000 hours operation—total	$98,200.00
Remaining fuel for other groups	$296,469.00
Total fuel charge	$394,669.00
Operating this group 6,900 hours, new fuel charges	$121,800.00
Remaining fuel for other groups	$225,669.00
Total fuel charge	$347,469.00
Adding capital charges on new investment	$4,290.00
Total, fuel, plus new capital charge	$351,759.00
Representing a saving of	$42,910.00

or 107.5 per cent on new investment of $39,900.

Case 2.—Revamping boilers A and B of group A, changing to single unit having air heater and water walls, pulverized fuel firing.

Present fuel cost per 1,000 lb. steam from these boilers taken at 34.1 cents and hours operating at 5,380—total	$104,005.00
Remaining fuel other boilers	290,664.00
Total	$394,669.00
Operating revamped boilers 6,600 hours at 300 per cent of rating—fuel costs	$163,500.00
Remaining fuel for other boilers	197,669.00
	$361,169.00
Adding capital charges, new investment	9,748.00
Total	$370,917.00
Representing a saving of	$26,237.00

or 24.35 per cent on investment of $107,750, when operating at 300 per cent of rating and with 10 per cent outage allowance.

It should be carefully noted that the existing boiler plant is not particularly modern, although with careful handling and attention to feed-water conditions there should be no reason why a reasonable life could not be expected; so that with due regard to expert opinion as to the possibility of converting the two boilers in Case 2 into one unit, the expenditure would be warranted. In Case 1, however, much better return is offered for the capital expenditure; moreover, no changes are required to the existing boilers. The economizer and air heater could, of course, be carefully figured, in order to suit any possible changes to the boiler plant, such as an installation of new boilers in place of the smaller boilers in this or other groups.

The electric power situation is not affected by either change, so that there remains the possibility of replacing the boiler plant for one of higher steam pressure, introducing turbo-generators for the production of power and delivery of steam required for these purposes. For guidance in this connection, a series of curves have been plotted, Fig. 6, from which, for study purposes, the E. H. P. available between various pressures for various quantities of steam may be observed. These figures are approximate only, and are, as already stated, for guidance only. The alternatives: (a) the installation of bleeder type turbines, bleeding for existing pressure and quantity requirements; (b) the same type, but with additional steam to 15 pounds, covering power shortages of (a) when estimating all purchased power; (c) bleeder type again, but to provide all steam required to eliminate purchased power, also for paper machine drives, thus removing the heavy bleed at 165 pounds for this purpose, carrying on down to 15 pounds for process, and beyond to 28 inches H. S. condensing for power requirements when process steam is insufficient to balance.

From the steam demand curve figure, it will be noted that the demand varies from 123,760 pounds per hour to 157,550 pounds per hour; and since the differences are not serious, it may be assumed that no difficulty would arise in the design of a plant that would operate under all conditions economically. Taking alternative (a), power available from a reduction of 358 pounds pressure to mill requirements by the month would produce approximately the following blocks of power:

Month	Required	Available
January	4790	3924
February	4800	3990
March	5400	3993
April	3500	3463
May	3800	2866
June	3300	2575
July	5000	2410
August	6000	2380
September	6200	2390
October	6200	2840
November	6200	3592
December	6200	4031

Alternative (b), bleeding for existing mill requirements, with additional steam to 15 pounds to cover power shortage, eliminating all purchased power, gives:

	E.H.P. required	Additional steam required
January	9550	95,600
February	9375	91,500
March	8900	78,400
April	5765	61,000
May	6260	56,900
June	5430	48,100
July	8230	81,400
August	9890	126,000
September	10220	131,500
October	10220	124,000
November	10220	111,200
December	10220	103,700

Alternative (c), bleeding for 80 pounds steam, exhausting to 15 pounds or to condenser, as balance requires:

	E.H.P. required	Additional steam to condenser
January	13,330	15,730
February	13,155	13,100
March	12,680	6,930
April	9,545	.....
May	10,040	.....
June	8,850	.....
July	12,010	19,850
August	13,670	31,800
September	14,000	33,900
October	14,000	28,500
November	14,000	21,400
December	14,000	17,060

Since (a), (b), and (c) call for higher steam pressures an entirely new steam plant would be required.

ALTERNATIVE (A):

A 385-lb. plant, consisting of three boiler units, two to produce full steam requirements with superheat to 225 deg. F., one for standby purposes, each unit comprising boiler, water walls, air heater, unit pulverizers, with drives, necessary fans, and soot blowing equipment, would cost approximately	$342,396.00
Piping, valves	15,000.00
Structural alterations to existing boiler room, including coal bunkers	20,000.00
Feed pumps	6,551.00
Foundations	3,000.00
Removal of old plant	9,000.00
Erection	9,493.00
Ducts and supports	4,500.00
Engineering	10,161.00
Total	$420,101.00

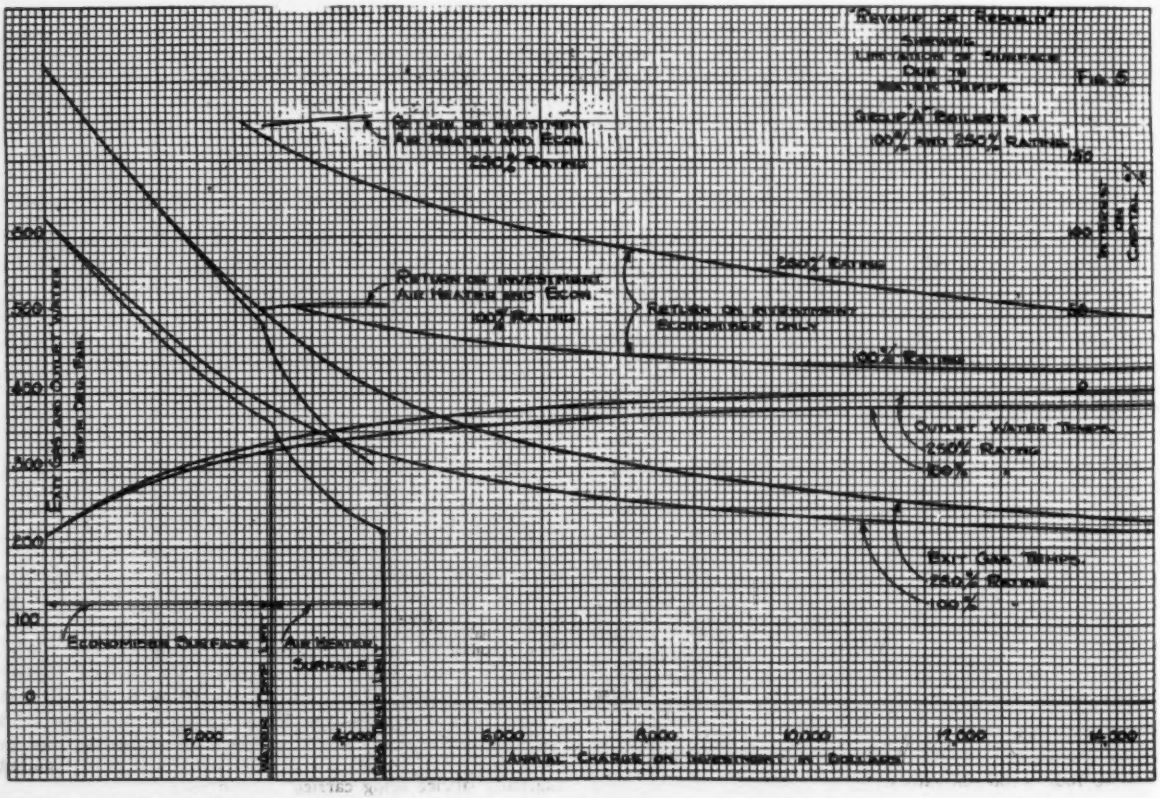

FIG. 5

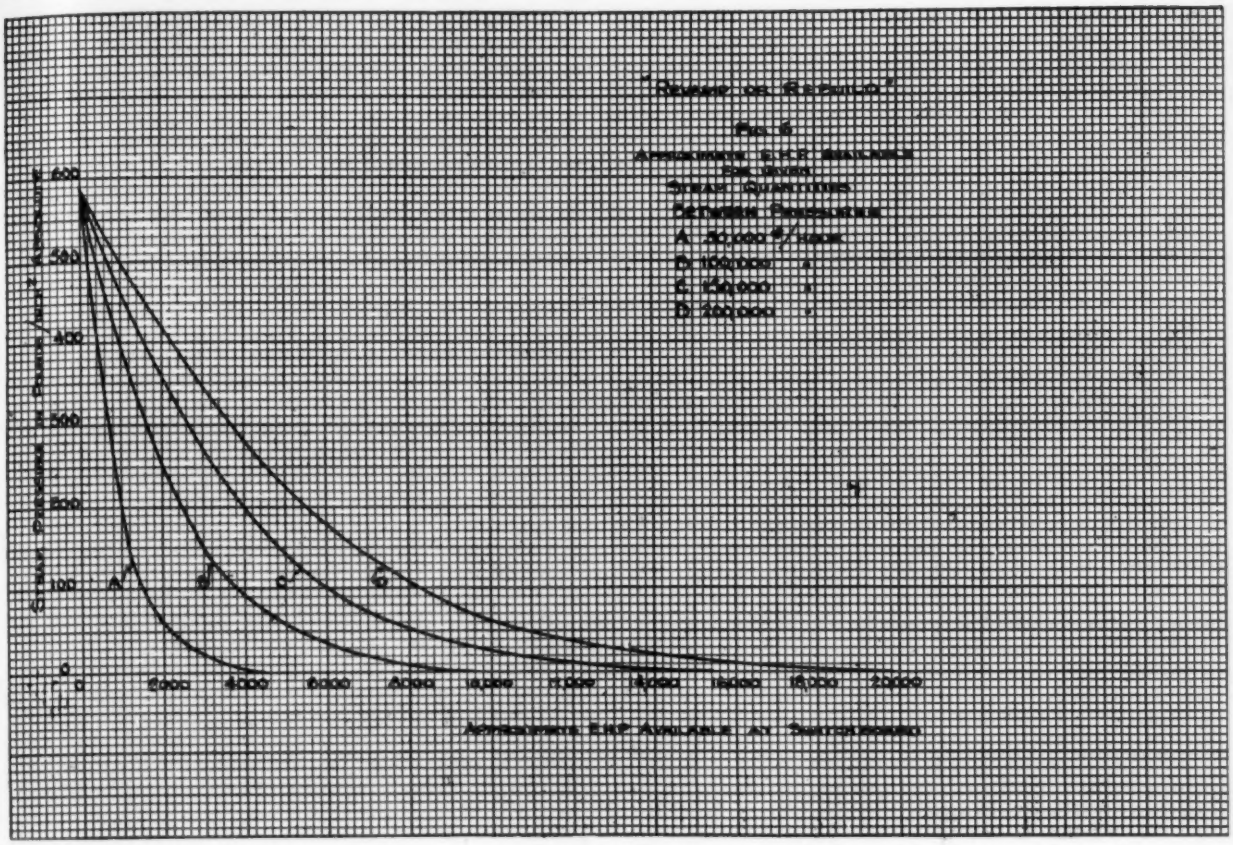
Fig. 6
Approximate E.H.P. required for given Steam Quantities between Crescendos
A. 50,000 #/hour
B. 150,000 "
C. 250,000 "
D. 350,000 "
Approximate E.H.P. Available at Shafts of Motors

FIG. 6

Estimated Operating Costs:	
Coal	$327,500.00
Coal handling	5,200.00
Ash handling	3,400.00
Cleaning	5,200.00
Attendance	4,290.00
Maintenance, labor and material	3,672.00
Supervision	1,809.00
Fixed charges	42,010.00
Total	$393,081.00
Electrical Equipment:	
Consisting of one 3000-kva. turbo-generator arranged for double extraction, together with direct connected exciter-cost	$74,300.00
Switchgear and panels	2,235.00
Cable	5,000.00
Foundations	7,000.00
Structural alterations	4,000.00
Steam piping and valves	1,500.00
Air ducts and strainer	1,000.00
Erection charges	1,500.00
	$96,535.00
Engineering	2,410.00
Total	$98,945.00
Operating Costs:	
Fixed charges	$10,722.00
Oil and waste	210.00
Attendance and cleaning	4,320.00
Supervision	432.00
Maintenance	425.00
Total	$16,109.00
Purchased Power:	
1st part	$82,500.00
2nd part	15,446.00
Total	$97,946.00
Total annual charges	$507,136.00
Present annual charges	535,404.00
By difference	$ 28,268.00
Total capital investment	$519,046.00
Interest on capital	5.43%

ALTERNATIVE (B):

In this case, additional steam requires one more boiler unit than (a) above, while in addition to this, the power requirements necessitate four turbo-generators.

Boiler units	$457,000
Structural alterations	22,500
Valves and piping	16,000
Feed pumps	6,551
Foundations	4,000
Removing old plant	9,000
Ducts and supports	6,000
Engineering	13,500
Total	$34,551
Estimated Operating Costs:	
Coal	$548,000
Coal handling	8,700
Ash handling	3,400
Cleaning	5,200
Attendance	5,790
Maintenance	4,950
Fixed charges	53,455
Supervision	2,309
Total	$631,804
Electrical Equipment:	
Consisting of four 3,000 K. W. double extraction units cost	$238,000
Switchgear and panels	7,180
Cable	16,000
Foundations	22,300
Structural alterations	12,800
Steam piping and valves	7,500
Air ducts	5,000
Erection	10,500
Engineering	6,500
	$325,780
Operating Costs:	
Fixed charges	31,997
Oil and waste	840
Attendance and cleaning	8,640
Supervision	864
Maintenance	1,700
Total	$44,041
Total annual charges	675,845
Present annual charges	535,404
By difference	140,441
Loss by this method of eliminating purchased current	$140,441

ALTERNATIVE (C):

In this case, the steam drive to paper machine as well as all purchased power is eliminated. The additional steam required to maintain balance being carried to condenser.

Boiler plant, three units as in Alternative (a), costs, total	$420,101
Estimated operating cost:	
Coal	366,000
Coal handling	5,200
Ash handling	3,400
Cleaning	5,200
Attendance	4,290
Maintenance	3,672
Supervision	1,809
Fixed charges	42,010
Total	$431,581

ELECTRICAL EQUIPMENT:

Here, the steam drive to paper machine and also all purchased power is eliminated. The additional steam required to maintain balance is carried to condenser.

Electrical equipment costs	$357,000
Switchgear	9,415
Cable	26,850
Foundations	36,800
Structural alterations	14,000
Steam piping and valves	11,300
Air ducts	6,500
Condensing plant	40,582
Erection charges	23,000
Engineering	17,400
Total	$542,847
Operating Costs:	
Fixed charges	$54,284
Oil and waste	1,010
Atendance and cleaning	8,640
Supervision	864
Maintenance	2,700
Total	$67,498
Conversion of paper-machine drive to electric.	
Estimated complete at	$80,360
Operation cost assumed to be same as for present drives	
Fixed charges	$8,036
total annual charges	$507,115
Total present charges	535,404
By difference	28,289
Total capital investment	$1,043,308
Interest on capital	2.71%

The important "use factor" may now be considered. For the purpose of simplifying the study, it may be safely assumed that, with the exception of fuel and purchased power charges, other items of annual charge would remain constant over the range of 50 per cent to 100 per cent output. Since fuel costs constitute a very high percentage of the total variable charges, it will be understood that the error would be negligible. Omitting fixed and operating charges on hydraulic power, the total power plus steam requirements would total annually:

Load factor	Total power	Present cost	"Revamped" Case 1	"Revamped" Case 2	New Plant Alt. A	New Plant Alt. C
100%	21500	651614	608704	627862	625346	623725
75%	16100	520202	481483	504950	536400	532225
50%	10750	405671	367219	425502	444150	440725
Cost per h.p., Plus Steam:						
100%	21500	30.30	28.30	29.25	29.00	29.00
75%	16100	32.50	29.30	31.40	33.30	33.00
50%	10750	34.50	34.10	39.40	41.00	37.65
Power Plus Steam Cost per Ton News Print:						
100%		6.64	6.27	6.42	6.36	6.37
75%		7.08	6.56	6.87	7.28	7.22
50%		8.27	7.5	8.65	9.08	8.9

The above results are plotted in Fig. 7 and are sufficiently accurate to indicate the value of the various arrangements. No allowance is made for possible change in efficiency of the boilers or auxiliaries, since the number of units should permit of maximum efficiencies being maintained. The above figuring represents the estimated costs and returns for the various arrangements considered, suggested by the study of conditions. It must be realized that they are purely estimated and that only possible major economies are dealt with. There are many minor economies that will occur to the reader, and which should undoubtedly be investigated before schemes involving very heavy capital expenditures are embarked upon. The use of steam and power for process purpose would obviously be carefully checked, in order to insure that only correct final quantities are used for estimates involving such expenditures as those before considered.

In summarizing the merits or demerits of the above schemes, Alternative (c) is the only one that will cover the entire requirements of the situation, producing as it does all electrical power used, regardless of the river-flow variation, creating better conditions within the mill by the use of electric drive to the paper machines, also removing the apprehension of the operators as to the continuity of operation, and moreover, leaving the hydro-electric development free to handle any increase in river flow which may arise due to increased loading from other sources: it has much to recommend it.

The high initial outlay, adding materially to the annual fixed charges, is more than balanced by the elimination of purchased power charge with a high load factor. It is true that at lower loading, costs increase above these presently obtaining. There are, however, very probably, adjustments that could be made in the operation at low production periods which would improve these figures. It may be feasible to employ water used in process for condenser requirements; the heating of feed water by the regenerative method also should be considered. Unfortunately the

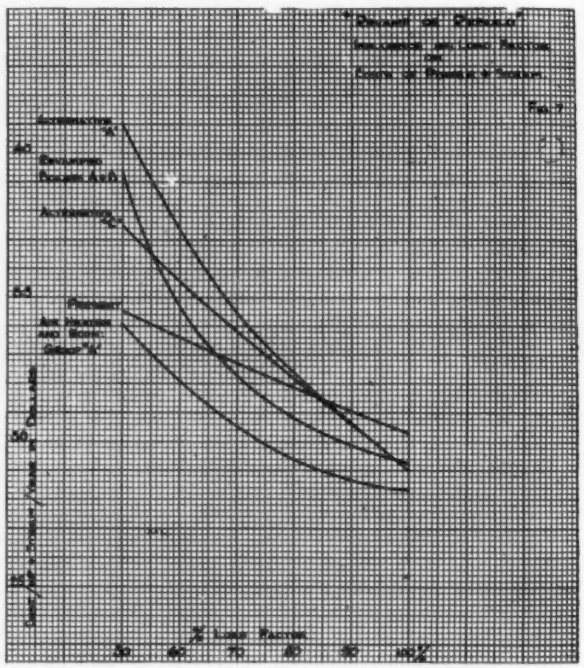

FIG. 7

time for the preparation of this paper has been very limited, so that many minor but important details have necessarily been neglected.

Alternative (b) is entirely eliminated, and has only been included to show that the use of condensing rather than regenerative feed heating is the more economical method of dealing with the additional steam requirements for load balancing in this case. Alternative (a) offers an admirable method of recovery for expenditures incurred in improving steam raising economy. It also provides a small additional supply of electric power. In the event of a new contract for purchased power supply being offered, it will be seen that a reduction in price should obtain sufficient to bring the cost of power down to the figure given in the above tabulation, total cost of power—Alternative (a). Failing a reduction, this plant would be still warranted on a renewal of the present contract. It should be apparent, however, that the advantages of having the extra power source made available by purchasing from a continuity of supply point of view, and which would obtain in any case were this Alternative (a) adopted, are outweighed by the independence offered by Alternative (c) before discussed.

In considering the revamping of the old plant, Case (a), which

deals with the installation of air heater and economizer, shows the highest return for the capital expended, basing the economy on increased use of this particular group of boilers. Thus, if in actual operation the use has to be reduced, then the economy would be very much lower. Considered from the point of view of outage, it will be seen that the use of preheated air is not likely to reduce the possibility of outage from causes connected with furnace upkeep; coupled with this doubt, there is also the necessity of providing for the continued purchase of electric power. The same reasoning would apply to Case 2, conversion of the boilers A and B to a single unit; again the economy is based largely on running the plant at high rating, with a minimum outage allowance. Outage due to furnace failure would be at a minimum, since furnace cooling is included; but the question arises as to the wisdom of incurring expense on new equipment for an old plant, remembering the revamped plant is to operate with increased output; moreover, the important power question is unaffected by the change. It is hardly thought, therefore, that such an arrangement is warranted either by the conditions or from an investment outlook.

In the make up of the boiler units for Alternatives (a) and (c), economizers have been excluded, since the cheaper form of heat recovery surface provided by air heaters is not affected by the limit of furnace temperature, the water-cooled wall being able to take care of any increase in temperature due to the use of preheated air; so that troubles due to ash fusion are obviated. The selection of 400 pounds absolute for the initial steam pressure is due to the fact that a division in design of boiler plant takes place hereabouts, which has the effect of very much increasing the cost of plant for the next range of pressure; so that the additional power available between, say, 400 and 450 pounds from the steam required would not be worth while. The steepness of the power curves given on Fig. 6 will indicate also that very little can be gained by raising the pressure to, say, 500 pounds. In any case, the gain in power that can be effected does not balance the increase in cost.

The erection charges would most likely be higher than those allowed in the compilation of the cost figures, since the mill would have to be kept in operation during the work of reconstruction; however, inaccuracies of this nature have little or no effect on the final analysis, the important thing being to understand just what may or may not be neglected in studies of this kind.

In conclusion, this paper will have served a useful purpose if it only assists in bringing to the notice of executives, engineers, and operators the necessity for very complete investigation before coming to conclusions in questions of this character. The writer's answer to the query is—Rebuild.

Now Rockford Fibre Container Co.

In February Rockford Paper Box Board Company, Rockford, Ill., an Illinois corporation, purchased all of the assets of Rockford Fibre Container Company, a South Dakota corporation. Thereafter the Rockford Paper Box Board Company changed its name so as to be Rockford Fibre Container Co., under which name this company will hereafter conduct and operate its business. The trade is advised that the name, Rockford Fibre Container Co., will represent all that formerly had to do with Rockford Paper Box Board Company and Rockford Fibre Container Company.

Exports of Finnish Pulp Larger

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., March 27, 1929.—Exports of pulp, both mechanical and chemical, from Finland during January were larger than during the corresponding month of last year, the former by 1,000 tons and the latter by 14,500 tons. Exports of news print paper, which constitutes the largest item in the paper shipments registered a decrease of approximately 3,100 tons while exports of wrapping papers and boards were approximately the same as in 1928.

Plans for Superintendents Meeting

The spring meeting of the Pennsylvania-New Jersey Division of the American Pulp and Paper Mill Superintendents Association will be held in Wilmington, Del., April 5 and 6.

The committee has arranged a very interesting and profitable program so that everyone who attends will be sure to enjoy the sessions at which time the following subjects will be presented: "Fourdrinier Wires in the Making," by R. N. Watts of Cheney-Bigelow Wire Works; "Grinding and Crowning of Paper Machine Rolls," by Joseph Stuart, of Lobdell Car Wheel Company; "Autogenous Metal Coating," by G. L. Coppage, of Pusey and Jones Corp.; "Bristol Recording Instruments and Their Uses in Paper Mills," J. H. Ferguson, of the Bristol Company.

All pulp and paper mill superintendents and executives of allied industries are cordially invited to attend this spring meeting. The meeting will be of direct practical benefit to everyone who attends. They will be sure to enjoy all of the sessions, plant visits, which include a trip through the Augustine Mills of the Jessup and Moore Paper Company, and an inspection trip of the plant of the Pusey and Jones Corp.

Arrangements have been made for the ladies' trip to Pierre S. DuPont's estate at Longwood Gardens where there is the most wonderful display in the United States of every known kind of flower and fruit.

The banquet will be held in the Gold Hall Room of the Dupont-Biltmore Hotel. The Hon. William N. Cann, president of the City Council will be toastmaster, and Dr. Manly P. Northam, Professional Industrial Counselor, will deliver the main address of the evening, his subject being "The One Big Secret Back of the Man Who Wins." The Hon. G. W. K. Forrest, Mayor of Wilmington, will also attend.

Registration will be at the Dupont-Biltmore Hotel from 6:00 to 9:00 P. M., Friday, April 5, and from 8:00 to 9:00 A. M. Saturday morning, April 6.

Road of the Timber-Starved Is Devious

Conservation week is dedicated to the avoidance of timber starvation. The first week in April has been set aside in New York State for instruction and action in behalf of public welfare with reference to our dwindling forest resources. Forest devastation in this country should be stopped for we are on the road that leads down to timber-starved people, says the New York State College of Forestry, Syracuse University.

The road of the timber-starved leads to destruction. Returning up that way is difficult, sometimes impossible—it is the path of penury and pain. It is blackened and bleached; it is obstructed by obstacles often insurmountable. It traverses the ruins of nature and the wrecks of industry. It means years of want and destitution. In several countries it has brought deprivation, pestilence and famine. In such countries the people have no visible prospect of recovery and must exist, if at all, for many generations timber-starved.

This seared road to the timber-starved may be traced in such countries as Mesopotamia, Northern Africa and Northern China. Two thousand years ago the people of Northern China cut and burned their forests as we have been doing in the United States and today they are abject paupers. Farming, manufacturing, water supply, except in destructive floods, and civilization are reduced to the lowest degree.

We can find the beginning of the road of the timber-starved in the United States. It is to be seen in the idle acreage, already a desert of 100,000,000 acres, the transient state of the lumber industry, the restricted pulp-wood supplies, the importation of 19/20 of the lumber used in New York, the erosion of the soil and the annihilation by floods. Conservation week is the time for everyone to turn, not to on side, but completely around and start back along the way towards restoration.

Fair Play in the Application of Pulp Tests

EDITOR OF TAPPI SECTION.

The rules and regulations for the sampling and testing of pulp, laid down by the Joint Committee of Approved Pulp Chemists form an excellent instrument in the hands of the experienced and conscientious pulp tester, assisting him in obtaining results that must be considered as fair and just, to the shipper of pulp, as well as to the receiver.

These rules and regulations may have their defects and shortcomings, but such shortcomings affect more their practical application, under certain circumstances, than the accuracy of the results obtained, and it is not the purpose of this article to criticize any of such defects, as may exist.

It is the manner, in which the results are handled, after the chemist has sampled a shipment, and reported the results obtained to the accounting department, together with certain other practices, that lead to differences and trouble, as everyone connected with the shipping and receiving of pulp, knows only too well.

It is a very regrettable fact that frequently the test figures, which were accurately determined and reported, by the chemist, are afterwards doctored by unscrupulous and, in their own imagination, clever clerks, who find such practice a convenient means to cover up and adjust discrepancies in their production figures.

The management, of course, is in most cases not aware of these doings of subordinates, or may, in some cases, be indifferent to it, wondering later on, when a customer kicks, and makes a claim for shortage.

But I know also of one case, where the management deliberately issued orders, to the employees in charge of shipping and billing, to increase the pulp contents by a certain percentage, over the results obtained by the chemist.

In another case, several years ago, the chemist of a large pulp mill, who had come to our plant to conduct a re-test on a number of cars of sulphate pulp, involving a claim of more than $1700.00, confided to me that he had known immediately that our test was accurate, and our claim justified, but that he had come to make that re-test, in order to save the prestige of his company.

"I know very well," he said, "that your test is accurate, because it agrees to one-fifth of one per cent with my own test, made at the time we shipped this pulp, but whenever I send my test reports to the office, they will boost the pulp contents a few points, so as to better the superintendent's pulp yield, and make some extra money for the company, if they can get away with it."

Such practices, of course, are nothing but fraud, plain and simple, and no manager of any first class mill would care to employ a subordinate, who is apt or willing to distort test figures in this manner, because an employee who will cheat, either to cover up his own deficiency, or in the interest of his company, will, as a rule, cheat his employer too, if he gets a chance to do so.

While these practices are very regrettable, and cause a lot of unpleasant differences and unnecessary expenses, I know from experience that they happen every day, and it should be the aim of everyone concerned with the shipping of pulp, to stamp out and make impossible the continuance of such methods, as they are foolish, and contrary of the best interests of the trade.

Unfair practices, however, are to be found not only in the shipping end of the pulp industry. There is another sin, on the receiving end, which I wish to bring into the light, at this occasion. The sin, I am referring to, does not constitute a fraud, by any means, but must be considered unfair, for the reason that it does not do justice to both sides.

The rules of the Joint Committee on Approved Pulp Chemists provide a tolerance of one per cent, for the moisture content, and any difference in test, or weight, within this tolerance, cannot be made the basis for a claim.

Pulp usually is bought and delivered on contracts, comprising more than just a single car.

The sin of the receiver now, which I wish to point out, is that he will invariably pick out the cars, which, according to his own test, show a shortage of more than one per cent, and call for a re-test and adjustment, involving expenses, which, in most cases, must be paid by the shipper, and which would be unnecessary if a little sense of fairness would be employed by the receiver.

It is obvious that, to be fair, a claim should be made only when individual shipments of a contract run consistently low. The test record of the receiver should be cumulative, and the shipper should be credited with any excess weights, just the same as he is held responsible for shortages. In other words, the adjustment of differences should be governed more by the dictates of the golden rule, as it is today.

The writer has handled pulp shipments in this manner, and, to give an instance of his experience with a cumulative test record, found that in the case of one contract, covering a period of one year, and involving more than two hundred cars, the ultimate difference consisted in a minus of only .015 per cent, although the total included approximately fifty individual cars, showing an excess or shortage of more than 1.0, and up to 3.5 per cent.

A considerable saving of re-test expenses was thus accomplished, simply by a fair and sane balancing of test results, which eliminated all differences and unpleasant friction, and it is needless to say that both, receiver as well as shipper, were highly pleased with the results.—HARRY M. KERN, Associate Member of TAPPI.

Makes High Electric Energy Output Records

The International Paper and Power Company system produced 344,529,000 kilowatt hours of electric energy in February, an increase of one-third over the output of the system in February, 1928. In the first two months of this year the company generated 723,306,000 kilowatt hours, 36 per cent greater than in the corresponding period of last year.

Included in the output figures are those of New England Power Association, of the Canadian Hydro-Electric Corporation, Ltd.—controlling the Gatineau Power Company and the Saint John River Power Company—and of the hydro-electric plants of the International Paper Company group.

The Canadian Hydro-Electric Corporation, Limited, produced 156,396,000 kilowatt hours of electric energy in February, 85 per cent greater than the output of the corporation in February, 1928. The production of the corporation in the first two months of this year was 329,091,000 kilowatt hours, an increase of 93 per cent over that of the first two months of last year.

The New England Power Association generated 121,728,000 kilowatt hours of electric energy in February, an increase of 18 per cent over February, 1928, and 51 per cent over February, 1927. In the first two months of this year the output of the association was 252,964,000 kilowatt hours, 18 per cent greater than in the corresponding period of 1928, and 49 per cent greater than in the first two months of 1927.

New Gasoline Hoist Booklet

The American Hoist and Derrick Company has just published a very attractive folder covering its newly designed gasoline hoist. The new hoist is powered with a Waukesha gasoline motor the same as previous "American" gasoline hoists. The power is transmitted to the hoist by means of a silent chain drive and is delivered to what would be the crank shaft on a steam hoist; the logical place to apply the power. The booklet also shows the "American" two-speed drag scraper hoist. Mounted on a five ton motor truck this hoist constitutes the power plant of a very productive and highly portable dragline installation. The American Hoist and Derrick Company, 63 South Robert street, St. Paul, Minn., will be glad to send a copy of this booklet.

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

Affiliated with

THE AMERICAN PAPER AND PULP ASSOCIATION

Edited by
THOS. J. BURKE, C. A., Sec.-Treas.

Depreciation Reserve Funds and Reproductive Values*

By Thomas J. Burke[1]

A Fixed Asset costing $15.00 is depreciated by the Straight Line Method at the rate of 6 2/3 per cent per annum, by setting up a Reserve for Depreciation of $1.00 per annum, at the end of each year. The theory is, that this annual Reserve shall be set aside out of profits to provide for the replacement of the asset at the end of the period, when it is estimated that it will be worn out and of no value (omitting salvage). A bookkeeping entry is made charging Profit and Loss Account with a $1.00 each year and crediting Reserve for Depreciation with this amount, so that at the end of 15 years there will be $15.00 standing at the credit of the Reserve for Depreciation Account.

The Asset now has to be replaced but where is the "cash money" to do it?

Of course, the theoretical plan contemplates that in addition to the bookkeeping entry referred to above, another entry will be made debiting Depreciation Reserve Fund and crediting the Bank Account, thereby reflecting on the books an actual transfer of $1.00 from the Bank Account to a Special Bank Account to be drawn on at the end of 15 years to replace the asset of $15.00. Thus the balance in the Special Bank Account will always equal the amount of the Reserve for Depreciation Account, and when the time comes to replace the asset, the money will be in the bank ready for use.

This is the part of the theoretical plan which is usually omitted for a reason that it quite obvious. Who wants to leave a large amount of money to accumulate at a low rate of interest in a bank, when it can be used or perhaps has to be used for other purposes?

That's part of the concern's capital and it's no use letting it lie idle or nearly so. Consequently the entry representing the transfer of the real "cash money" is omitted and the funds which should be set aside annually to accumulate for the purpose of being available to replace the fixed assets when necessary, are left in the business and used for other purposes.

Property Investment Large

In an industry such as ours, where the investment in fixed assets is always equal to 50 per cent of the total capital invested and often rises to 75 per cent and more, this is a matter that deserves careful consideration by our executives, viz., where is the "cash money" to come from when we have to pay for a big capital replacement?

Another important consideration is, that after all, the rate at which the depreciation reserve is computed is only a matter of opinion; it may be too high or it may be too low! In fact, a major improvement may be made in the art, so that to keep going, such a replacement has to be made much sooner than was anticipated.

I, personally, am satisfied that this is one of the things that is wrong with our industry. We're giving away too much for the money. We're putting money which really should be used for one purpose, to work at another, and giving the benefit to our customers. When we start, if 50 per cent of our capital goes into fixed assets, for the first year we have 50 per cent for working capital. At the end of the first year, we have say 105 per cent in assets, having made 5 per cent profit. In figuring profits, we have allowed 6 2/3 per cent for depreciation. What's roughly the situation at beginning of second year? We have 46 2/3 per cent in fixed assets and 53 1/3 per cent in working capital, if we pay a 5 per cent dividend. What we should have, would be, 50 per cent in Working Capital, 46 2/3 per cent in Fixed Assets, and 3 1/3 per cent in Special Depreciation Reserve Fund in Bank (6 2/3 per cent on 50 per cent of total investment).

Funds Transferred Annually

Please understand, I am not advocating that this money should necessarily be left in the bank for the whole period during which the Fixed Assets are disintegrating. I am suggesting, however, that as a test of the liquidity of the business, and to conform to good business practice, the transfer of funds should actually be regularly made at the end of each fiscal period. Now, as to how long they should remain there, must depend entirely upon the exigencies of the business. My own opinion is, that such funds should only be drawn on for use in improving the fixed assets.

If required for other purposes, would it not be a sign that the business was expanding to the point where more capital was required? If you could carry on the first year with 50 per cent of your capital, why not the second, and third years?

Interest Payable on Withdrawals

If used for "fixed assets" either in additions or improvements, it is my opinion, that interest at 6 per cent on the amount borrowed from the fund should be charged against the operations yearly thereafter and credited to a Reserve for Depreciation Interest Account, also the amount of this interest should be withdrawn from the Bank Account and placed to the credit of a Depreciation Reserve Fund Interest Account. The reason for this is, of course,

* Presented at the Convention of the Cost Association of the Paper Industry, Feb. 20, 1929, at the Waldorf-Astoria Hotel, New York.

[1] Sec.-Treas. of the Cost Association of the Paper Industry.

that had the money been invested in sound securities your Depreciation Reserve Fund would have been increased by this amount.

You will say at once, "But why is this necessary, since we are depreciating our Fixed Assets on the 'straight line method,' which as you know simply means that an equal amount is set aside each year until the total thus accumulated equals 100 per cent of the cost of the asset." Thus, if you depreciate at 10 per cent yearly, at the end of 10 years your asset will be fully depreciated. Interest then, you will say, does not enter into the question at all. You are correct; it does not enter into the "straight line" theory, but you are not following that theory entirely, because you are not setting aside the actual funds each year. You are merely making a bookkeeping entry charging your profits and crediting a depreciation reserve account, without giving the entry teeth by actually setting aside the "cash money" to provide the funds to meet the liability for the reserve.

Compared with Bond Issue

Imagine a situation where bonds were issued for the full amount of the fixed assets. It would be necessary in a case like that to set aside yearly an amount sufficient to amortize the bonds and pay the interest. Instead of dealing with bondholders who demand their pound of flesh, you are dealing with trusting shareholders or investors, who are relying on your integrity and good business judgment to conserve their investment and pay them an adequate return for its use. In one case, you *have* to set aside this amount annually, what ought you to do in the other?

Of course, I must admit the "straight line" theory makes no allowance for interest on the amount set aside yearly, but it *does* contemplate that the actual funds should be accumulated.

"Reproductive Value" Plan

Now, as to the interest, I want to say, that I believe there is another sound reason why we should take this into consideration and this reason has to do with the theory being propounded far and wide, by some of our appraisal friends and others, viz., that depreciation should be figured not on cost value but on a value, representing the cost of reproducing the property being depreciated, at present day or estimated future prices. I am strongly opposed to this suggestion for several reasons (of what I conceive to be a practical nature), one of which is, that it is difficult to get the average industrial executive to give much time to a consideration of his depreciation problems, even when cost values are being used. If we advise him to scrap these for cost purposes and use "reproductive" values when figuring depreciation, we shall simply place another difficulty in his way to a proper understanding of what his accountants are trying to do.

You will then ask what should be done about the fact that the dollar has depreciated until it is worth about 60 cents in terms of the dollar used when you built your mill. My opinion is, that this being a separate problem it should be treated as such. Set aside a special reserve from the profits, yearly, to make up the difference between the depreciation figured on a reproductive value and depreciation figured on cost values. This would necessitate the same preliminary investigation as to what amount represented "reproductive" value, so that we might know just how we stand as regards the actual present-day value of our plant, and know just how much it would cost us yearly to make adequate allowance for this "dollar depreciation." Moreover, if selling prices permitted, we could incorporate the annual amount required in our cost figures, as a regular cost of doing business *without changing our book values.*

"Fund" Method Simpler

But is this entirely necessary?

Need we bother about reproductive values if we set aside yearly, the actual amount necessary to depreciate our assets on the "straight line" method, in a separate bank account and invest the funds to bring in a return of 6 per cent or charge ourselves that interest if we use them for other purposes?

We want to simplify our accounting methods as far as possible, and this business of writing up our fixed assets to represent their value at so-called "reproductive cost" is a cumbersome job.

We want our accounts to represent the facts of the situation, yet even when all this work is completed we realize we haven't made any money by it. We have simply re-arranged our figures on what some people consider a more equitable basis for figuring depreciation. We shall have to use the old method for income tax purposes, but for cost purposes, we have another way of figuring which will permit us to allow for the appreciation that has taken place in the value of our assets because the dollar we now set aside will only buy 60 cents worth of plant. That, as I understand it, is the main argument for setting up depreciation on a "reproductive cost" value.

Interest Accruals 56 Per Cent

My belief is, that this work is unnecessary, and that by following through the "straight line" theory and by taking advantage of the fact, that no allowance is made for interest accruals in figuring depreciation under that method, we can increase our depreciation reserve sufficiently through these interest accruals to take care of the increased cost of reproducing our plant.

	Amount reserved yearly	Interest compounded annually at 6 per cent per annum	Interest period in years
At end of 1st year.....	$1.00	1.26090	14
At end of 2nd year.....	1.00	1.13292	13
At end of 3rd year.....	1.00	1.01219	12
At end of 4th year.....	1.00	.89829	11
At end of 5th year.....	1.00	.79984	10
At end of 6th year.....	1.00	.68947	9
At end of 7th year.....	1.00	.59384	8
At end of 8th year.....	1.00	.50363	7
At end of 9th year.....	1.00	.41851	6
At end of 10th year.....	1.00	.33822	5
At end of 11th year.....	1.00	.26247	4
At end of 12th year.....	1.00	.19101	3
At end of 13th year.....	1.00	.12360	2
At end of 14th year.....	1.00	.06000	1
Totals	$15.00	$8.27589	

An examination of this table shows we have an asset worth $15.00 which we estimate will last 15 years. We, therefore, depreciate it at the rate of 6 2/3 per cent per annum or $1.00 per annum.

The entries are—

Profit and Loss Account.....	Dr. $1.00	
To Reserve for Depreciation Account..		Cr. $1.00
Also Depreciation Reserve Fund.....	Dr. 1.00	
To Bank		Cr. 1.00

That's the entry made for 15 years at the end of each fiscal period. Assume the money in the Depreciation Reserve Fund is invested to bring in 6 per cent or if used in the business, the same rate of interest is paid to the Fund. We then find that at the end of the fifteenth year instead of having $15.00 at the credit of our Depreciation Reserve Fund, we have $23.27. In other words, our fund is equal to 156 per cent of the original cost of our asset. This is so because the $1.00 we set aside at the end of the first year with compound interest at 6 per cent, will have increased to $2.26, the $1.00 set aside at the end of the second year to $2.13, and so on down the line to the single dollar reserved at the end of the fifteenth year.

While this increase of 56 per cent in the Reserve Fund will not entirely take care of the increased cost of replacing our assets, if in fact the present-day "construction dollar" will only buy 60 cents worth of mill on the basis of what the 1913 or 1914 dollar would buy, yet it will very nearly make up this deficiency.

Ratio of Fixed Assets to Investment

Another thought in this connection is, that if the "cash money" is actually credited to a special Depreciation Reserve Fund in the bank yearly, it will serve to focus the executives' attention on the ratio existing between the capital invested in fixed assets and that available for current uses.

If the money is used, the fund will have to be drawn on and the fact whether the money is being used for fixed or current purposes is, of course, immediately ascertainable.

Usually the tendency seems to be in the pulp and paper industry to tie up too large a proportion of the capital in fixed assets and this is a matter that requires careful executive consideration. If the fund is exhausted and still more money is required for fixed

assets it should serve as a sure sign that the investment in these assets is becoming top heavy, unless more capital is forthcoming.

The Asset Side of the Balance Sheet would read as follows, if above plan is followed:

FIRST YEAR		
Fixed Assets		$1,500,000
Current Assets		500,000
		$2,000,000
SECOND YEAR		
Fixed Assets	$1,500,000	
Less Reserve for Depreciation	100,000	
		$1,400,000
Depreciation Reserve Fund		100,000
Current Assets		500,000
		$2,000,000
THIRD YEAR		
Fixed Assets	$1,500,000	
Less Reserve for Depreciation	200,000	$1,300,000
Depreciation Reserve Fund		200,000
Depreciation Reserve Fund Interest Account		6,000
Current Assets		500,000
		$2,006,000

I have used 6 2/3 per cent as the rate of depreciation in this example, because it appears to be a very fair "over-all" depreciation rate for use in the paper and pulp industry.

Also a 6 per cent interest rate, as this is a fair estimate of the cost of money.

Other points deserving consideration are that:

1—Money in fixed assets turns over about once in 15 years.

2—Money in inventories about once in ten weeks.

3—Money in accounts receivable about once in four weeks.

These, of course, are merely close approximations but serve to illustrate the importance of watching the proportion or ratio existing between the total capital investment and the investment in fixed assets.

When we make entry crediting our Depreciation Reserve Account with amount required to cover the estimated depreciation on our property, we make it impossible for dividends to be paid from cash available, which will later be required to replace our property.

When we also set the cash aside in a special Depreciation Reserve Fund we earmark it in such a way that it cannot be used for any other purpose but the specific purpose for which it is intended unless or until we determine that good business management requires that we shall borrow the money from the fund, at 6 per cent per annum, because we can use it to such good purpose, that we can make a substantial profit on it over and above the 6 per cent interest paid for its use.

I believe this is a better plan than changing our books to reflect reproductive values, yet the interest we accumulate at the credit of this fund in this manner, at the end of 15 years, should be nearly sufficient to make up the difference between the original cost of the property and what it will cost to reproduce it.

Effect of Declining Gold Production

In conclusion, may I remind you, that there is always the possibility that when the time comes to replace our obsolete or worn-out property, prices may not be as high as they now are. In this connection let me quote a paragraph from "February Market Facts," published by the Writing Paper Manufacturers Association, which you know was founded in 1861, so can be said to have cut its wisdom teeth as an association, and has seen many business cycles come and go. The paragraph reads as follows:

"Looking ahead, however, *after* 1930—that is, 1931 to 1935—*we are very likely* to be confronted with *lower prices* in the United States, and in the world generally, because the production of gold is declining and is insufficient to meet the increasing needs of business."

Perhaps, therefore, we are worrying ourselves unnecessarily about reproductive values and, by maintaining adequate cash reserves, may at all times be in a position to meet any eventualities that may arise.

The International Fixed Calendar-What It Is and Why We Want It*

By Seth L. Bush[1]

Fifteen years ago it was the accepted practice among paper mills to close the accounts and calculate the profits once in six months. Some mills made only an annual closing.

Modern Management Demands Monthly Profit Statements

There has since been a growing need for reasonably accurate calculation of profit over shorter periods of time. Modern accounting practice has met this need, and today the preparation of complete financial statements at least monthly is quite common.

Most mills have adopted in some form or other, relatively modern cost finding methods. It is possible no longer for us as paper manufacturers to operate intelligently without comparison of results over short periods of time. Yet when we attempt the accumulation of cost data and the comparison of vital information on the monthly basis, we meet the usual difficulties.

Monthly Comparisons Useless Unless Analyzed

Paper mills, operating as they do 24 hours per day, find it more than ordinarily troublesome to make a break in accounting records in the middle of the week. It is practically impossible to make intelligible comparisons between the months because of the varying number of possible working days.

Adopted 13 Period Calendar in 1913

The generally accepted means for avoiding these difficulties is the adoption of the 13-period calendar. The Crocker-McElwain Company and the Chemical Paper Mfg. Co. adopted such a scheme in 1914, have found much of advantage in it, and nothing of disadvantage as far as internal records are concerned.

What at first seemed to be a difficulty in reconciling monthly handling of our accounts payable and accounts receivable balances, with all our other procedure on a period basis soon ceased to be a problem. At the close of each period we use the book figures of accounts receivable and accounts payable without attempting to verify them beyond the daily verification which we consider necessary under any conditions. Then at the first of the month we check our balance of accounts receivable in connection with sending out the monthly statements to customers and following that we verify our accounts payable balance in connection with organizing our invoices for payment during the month.

The question of an extra day in each year and two extra days in leap year was easily met in our case by including one five-week period about every six years. This brings our annual closing sometimes a trifle before January 1st and sometimes a trifle after but we always consider our closing as being Dec. 31st for purposes of tax returns and other reports. No objection to this procedure has ever been raised and we see no reason why it ever should be.

Increasing use is being made of the comparative data assembled and disseminated by trade associations and other agencies.

* Presented at the Convention of the Cost Association of the Paper Industry, Feb. 19, 1929, at the Waldorf-Astoria Hotel, New York.

[1] Manager, Research Dept., Crocker-McElwain Co., Holyoke, Mass.

Very often information issued by some of the Government Departments or Bureaus becomes a part of the data gathered by trade associations and individual plants. All such information now being assembled on a monthly basis becomes less useful to an individual concern which operates on the 13-period basis.

Value of Comparative Data Greatly Increased

Many concerns have demonstrated that a calendar of 13 four-week periods is practical and advantageous. Its use is bound to increase. But the full benefit of such a calendar cannot be realized until it becomes common practice.

Our Cost Association has been a pioneer in some of its work but we have been very slow to grasp the advantages that are readily ours when we use the combined information of the group in a comparative fashion for the benefit of the individual member. As we advance in the knowledge and the practical use of comparative data the factor of time becomes increasingly important.

Will Help Forecasting

Modern industrial management will more and more demand accurate comparison of past performance as a guide to the intelligent forecast of the future. In this process, the inconsistencies of the present calendar, when once fully realized, will not be tolerated. Should we not, then, urge upon the paper industry the general adoption of the 13 period idea, and should not the paper industry as a whole align itself in favor of International Calendar Simplification?

New Month To Be Called "Sol"

The question of what to do with the extra day in each year and the extra two days in leap year has been sensibly answered by the suggestion that Year Day be observed between Saturday, December 28, and Sunday, January 1, and that Leap Day be inserted in the same manner between two of the summer months. The new month would be placed between June and July, and would be called "Sol."

To the objection that the simplified calendar would complicate matters in connection with the figuring of interest, the observance of anniversaries, etc., there are perfectly sensible answers. Through international conference the settlement of matters much more complex is taken for granted. In fact, a close study of the matter impresses one with wonder as to why we have so long put up with the inconsistencies of the present calendar. It is merely a matter of habit so long established that some people seem to think that changing the calendar would be like changing the law of gravitation.

Monday Holidays Advantageous to Paper Industry

It has been suggested that with a simplified calendar we might arrange to celebrate all holidays on Monday. Surely such a week-end arrangement would be a boon to millions of people. Such an arrangement for holidays would work out exceptionally well for paper mills, avoiding as it would the necessity of starting up on Monday morning, shutting down again for a holiday observed on Tuesday, and then starting up again on Wednesday with all the attendant loss of effective time.

George Washington Born February 11th

Those who look with horror upon changing the date for the observance of holidays, and particularly such holidays as we observe in memory of our great men, cannot help getting a shock when they discover that George Washington was not born on February 22 but rather on February 11. In fact, when we begin to enumerate all of the peculiar things about the present calendar, we become convinced that in the interest of the general public a much more orderly arrangement can well be made.

Industry is sometimes accused of advocating the simplified calendar from selfish motives. It is true that the simplified form would be much better for industry to operate under. Is it not also just as true that any such advantage accruing to industry as a whole must find its way eventually to the door of the ultimate consumer in the shape of lower costs and better service? If we will but study the matter dispassionately, the conviction will grow upon us that the change should be made.

League of Nations Requested Each Country to Study "Calendar Simplification"

It may be of interest to those who look with favor upon this calendar reform, to know that there has been distinct progress in the last few years toward its universal adoption. The League of Nations some time ago asked each country to set up a national committee to look into the question of Calendar Simplification. The Pan-American Congress at the recent meeting in Havana unanimously endorsed the League's invitation and asked their members to have such a committee appointed. The League presented the matter to our Secretary of State, Mr. Kellogg, and a National Committee for the United States has been formed under the chairmanship of Mr. George Eastman. The committee is composed of government officials and representative men and women from business, religious, and many other fields.

Resolution Introduced in Congress

A joint resolution has been introduced in Congress and a number of hearings have been held before the House Committee on Foreign Affairs. The Committee plans to make the testimony now in its hands available not only here in our own country, but in other countries as well. There is hope that a simplified calendar may be possible for use beginning with January 1, 1933, which is the next year to start on a Sunday. As all 13 months under the "International Fixed Calendar" plan will start on a Sunday, all having just 28 days, it is essential that the first year this calendar is inaugurated shall start with a Sunday. We have, therefore, just about 4 years to work to bring about a change that will have far-reaching consequences of benefit to many of us and disadvantages to none. Let us all, then, work for the adoption of the International Fixed Calendar, another step toward the accountants' millennium.

News Print Production for February

Production of news print in Canada during February, 1929, amounted to 187,200 tons and shipments to 186,395 tons, according to the News Print Service Bureau. Production in the United States was 103,644 tons and shipments 108,375 tons, making a total United States and Canadian news print production of 290,844 tons and shipments of 294,770 tons. During February, 18,783 tons of news print were made in Newfoundland and 1,367 tons in Mexico, so that the total North American production for the month amounted to 310,994 tons.

The Canadian mills produced 23,972 tons more in the first two months of 1929 than in the first two months of 1928, which was an increase of 6 per cent. The United States output was 4,361 tons or 2 per cent less than for the first two months of 1928. Production in Newfoundland was 4,447 tons or 13 per cent more in the first two months of 1929 than in 1928, and in Mexico 440 tons more, making a total increase of 24,498 tons.

During February the Canadian mills operated at 77.9 per cent of rated capacity, United States mills at 77.0 per cent, and Newfoundland mills at 99.3 per cent. Stock of news print paper at Canadian mills totaled 25,536 tons at the end of February and at United States mills 35,642 tons, making a combined total of 61,178 tons which was equivalent to 3.9 days' average production.

Bailey Meter Co. Moves Cincinnati Office

CLEVELAND, Ohio, March 25, 1929.—The Bailey Meter Company, manufacturers of power plant metering equipment and automatic combustion control, announced that the rapid growth of its business in Southern Ohio, Kentucky and West Virginia, has necessitated transferring its Cincinnati office to new and larger quarters at Room 412 Union Central Building. E. R. Dearborn, who has represented the Bailey Meter Company in this territory for a number of years, will continue as branch manager.

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COLOWOVE—No. 268,733. Hesse Envelope & Litho. Co., St. Louis, Mo. For mailing and correspondence.

AMERICAN INDUSTRIES BOND—No. 275,743. Michael Milton, New York City. For bond paper for writing and printing purposes.

PRODUCT OF PORT HURON with fanciful picture of a bird—No. 277,380. Port Huron Sulphite and Paper Company, Port Huron, Mich. For paper bags, drinking cups, typewriter papers, printing and writing papers, etc.

OLD ABBEY—No. 278,719. Howard Rush, Inc., New York City. For paper used for printing, writing, bookkeeping, and typewriting and mailing envelopes.

SOX-O-GRAM—No. 279,064. A. V. Victorius & Co., New York City. For mailing form.

A. A. A. Dutch Binder Twine—No. 278,966. Frank W. Winne & Son, Inc., Philadelphia, Pa. For binder twine.

VIS-U-ALL—No. 270,758. Sales Equipment Company, Detroit, Mich. For loose leaf blank books.

BARONET—No. 278,048. The Menasha Products Company, Chicago. For paper napkins.

GLENCO—No. 278,050. The Menasha Products Company, Chicago. For paper napkins.

CREST—No. 278,052. The Menasha Products Company, Chicago. For paper napkins.

A PICTURE OF INSURANCE—No. 278,127. Karl J. Guhne, St. Louis, Mo. For insurance record sheets and cards.

NU-ART—No. 278,315. Standard Paper Manufacturing Company, Richmond, Va. For blotting paper.

CORRFIBRE—No. 276,706. Container Corporation of America, Chicago. For shipping containers made from corrugated board formed with a facing sheet of solid fiber board.

W. H. Holden Again Heads Paper Association

At the annual meeting of the Paper Association of New York City, held at the Arkwright Club last Thursday, March 21, W. H. Holden, of the Holden & Hawley Division of George W. Millar & Co., was reelected to the office of president; Oswald F. Marquardt, of Marquardt, Blake & Decker was elected vice president in charge of the Fine Paper Division; Rudolph L. Walton, of D. S. Walton & Co., was re-elected vice-president in charge of the Wrapping Paper Division; H. B. Thurston, of Conrow Bros., was re-elected treasurer, and Irwin Slote, of 41 Park Row, New York, secretary.

William E. Ebbets, of Coy, Disbrow & Co., and Elwin Walker, of the Walker-Goulard-Plehn Company, Inc., both of the Wrapping Paper Division; and Bert E. Linde, of the J. E. Linde Paper Company, and Robert Schmidt, of the Miller & Wright Company, both of the Fine Paper Division; were all elected to fill vacancies on the board of directors.

In the evening a highly successful dinner and entertainment was held in the Arkwright Club, which was attended by a large and enthusiastic gathering of members and their friends from far and near. On behalf of the association President W. H. Holden welcomed those present in a warm and breezy manner. He congratulated the Paper Association of New York City on the personnel of its officers and members and praised the hard work accomplished by the Sports and Pastimes Committee in arranging such a memorable dinner and entertainment. He announced that there would be no speeches during the evening.

Throughout the excellent banquet which was provided, popular selections were rendered by an exceptionally talented orchestra. The program which followed was varied sufficiently to appeal to everyone's taste. Charming members of the fair sex sang, danced, and made "whoopee" in the approved cabaret fashion; comedians brimming over with irresistable humor, and versatile vocalists, also helped to keep the gathering in good spirits; while an accomplished magician and an extraordinary impersonator of a "One-man band" were applauded again and again for their efforts. The program was provided by the Walker Entertainment Bureau, of 155 East 42nd street, New York.

Canadian Paper Exports Decrease

February exports of pulp and paper from Canada were valued at $14,399,942, according to the report issued by the Canadian Pulp and Paper Association. This was a decline of $1,736,256 from the January total and was less than the total for February, 1928, by $1,271,846.

Exports of wood-pulp in February were valued at $3,198,828 and exports of paper at $11,201,114 as compared with $3,645,154 and $12,491,004 respectively in January.

Details for the various grades of pulp and paper in February, 1929 and 1928, are as follows:

	February, 1929		February, 1928	
PULP:	Tons	$	Tons	$
Mechanical	9,927	276,333	14,371	374,921
Sulphite Bld.	20,758	1,598,373	18,064	1,339,896
Sulphite Unbld.	14,427	712,662	14,845	759,501
Sulphate	9,682	582,584	15,084	893,046
Screenings	1,343	28,876	1,939	35,648
	56,137	3,198,828	64,303	3,403,212
PAPER				
News print	174,469	10,615,726	183,414	11,822,383
Wrapping	1,665	187,762	1,736	187,309
Book (cwts)	7,944	59,438	3,924	32,824
Writing (cwts)	1,039	8,596	184	1,483
All other	.....	329,592	.....	324,577
	.....	11,201,114	.....	12,368,576

For the first two months of the year exports of pulp and paper were valued at $30,536,140 as compared with a total of $29,559,830 in the corresponding two months of 1928, and increase for the current year of $976,310.

Wood-pulp exports in the two months were valued at $6,843,982 and exports of paper at $23,692,158 as compared with $6,474,659 and $23,085,171 respectively in the first two months of 1928.

Quantities and values for the various grades were as follows:

	2 Months 1929		2 Months 1928	
PULP:	Tons	$	Tons	$
Mechanical	26,698	696,395	25,148	650,801
Sulphite Bl.	44,086	3,372,286	33,722	2,542,759
Sulphite Unbld.	29,017	1,445,108	32,245	1,647,684
Sulphate	20,988	1,258,253	26,417	1,567,504
Screenings	3,530	71,940	3,420	65,911
	124,319	6,843,982	120,952	6,474,659
PAPER:				
News print	369,516	22,589,341	340,880	22,063,053
Wrapping	3,097	340,061	2,923	320,600
Book (cwts)	13,461	108,585	8,314	67,480
Writing (cwts)	1,060	9,336	1,197	11,743
All Other	.....	644,835	.....	622,295
	.....	23,692,158	.....	23,085,171

Pulpwood exports in the first two months of the year amounted to 192,549 cords valued at $1,732,992 as compared with 286,838 cords valued at $2,590,613 exported in the corresponding months of 1928.

"Presenting Printing"

Recognizing the importance of presenting the practical aspect of paper in relationship to the printed page, Provincial Paper, Ltd., head office Toronto, has designed a series of folders under the general title "Presenting Printing" and the first one is now in the hands of paper dealers and printers. The series is intended to provide a wealth of illustration and decorative material of practical value in visualizing and working out ideals for catalogs, booklets, brochures, covers, folders, etc., as well as printing much of valuable suggestion in connection with printing problems. Various protographic treatments are being shown and engraving processes represented as well as some splendid examples of color printing. The series will also embrace a definite and carefully considered demonstration of the versatility of "Oxford Book" and its affinity for a wide range of printed matter.

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Same strength in beater with new shred as wet pulp.

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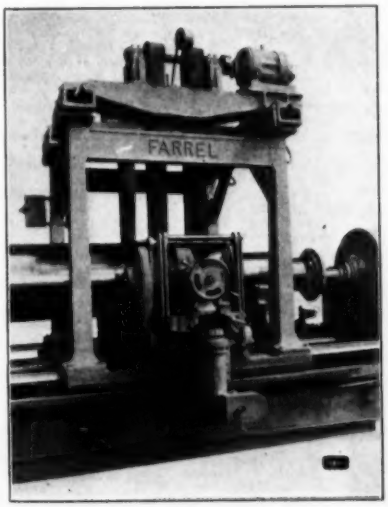

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REG U.S. PAT. OFF.

FARREL NEW TYPE ROLL GRINDER is the only grinder made with combined SWING REST and CROWNING DEVICE, which makes for much more accurate and faster grinding. The combination is shown in the close-up at the left. The crowning device can be set in the minimum time and produces a perfect crown.

FARREL ROLL GRINDERS are made in 24", 32", 36" and 42" sizes, all electrically driven throughout and fitted with the combination Swing Rest and Crowning Device, Geared Head and Automatic Lubrication.

FARREL-BIRMINGHAM COMPANY INC.

ANSONIA, CONN.

Successor to: { Farrel Foundry & Machine Co., Ansonia, Conn., Est. 1848.
{ Birmingham Iron Foundry, Derby, Conn., Est. 1936.

Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING MARCH 23, 1929

SUMMARY

Cigarette paper .....111 cs.
Wall paper .....7 bls., 21 cs.
Paper hangings .....66 bls., 12 cs.
News print .....639 rolls
Printing paper .....105 rolls, 263 cs.
Wrapping paper .....15 rolls, 100 bls., 72 cs.
Packing paper .....205 bls., 13 cs.
Colored paper .....45 cs.
Decalcomania paper .....37 cs.
Litho paper .....25 cs.
Parchment paper .....7 bls., 7 cs.
Writing paper .....12 cs.
Photo paper .....7 cs.
Gold coated paper .....5 cs.
Baryta coated paper .....42 cs.
Surface coated paper .....185 cs.
Drawing paper .....99 cs.
Filter paper .....105 bls., 44 cs.
Marble paper .....6 cs.
Tissue paper .....62 cs.
Gummed paper .....4 cs.
Pith paper .....2 cs.
Stencil paper and ink.....176 cs.
Pigment paper .....1 cs.
Transparent greaseproof paper.....25 cs.
Copying paper .....25 cs.
Raw paper .....58 cs.
Trunk paper .....2 cs.
Straw boards .....159 rolls
Straw paper .....36 bls.
Miscellaneous paper .....249 bls., 96 cs.

CIGARETTE PAPER

P. J. Schweitzer, Pres. Hayes, Marseilles, 111 cs.

WALL PAPER

F. J. Emmerich, Megantic, Liverpool, 2 bls.
F. J. Emmerich, Deutschland, Hamburg, 1 cs., 1 ble.
American Exchange Irving Trust Co., Deutschland, Hamburg, 18 cs.
Globe Shipping Co., Deutschland, Hamburg, 2 bls.
Majestic Shipping & Forwarding Co., Berlin, Bremen, 2 bls.
Davies Turner & Co., Aquitania, Southampton, 2 cs.
J. E. Bernard, Samland, Antwerp, 19 pkgs.

PAPER HANGINGS

W. H. S. Lloyd & Co., American Trader, London, 66 bls., 5 cs.
Whiting & Patterson Co., Inc., Aquitania, Southampton, 7 cs.

NEWS PRINT

Perkins Goodwin & Co., Westphalia, Hamburg, 449 rolls.
F. Henjes, Jr., Deutschland, Hamburg, 66 rolls.
Times Union, Drottningholm, Gothenburg, 124 rolls.

PRINTING PAPER

E. Dietzgen & Co., Berlin, Bremen, 41 cs.
P. C. Zuhlke, Berlin, Bremen, 91 cs.
Keuffel & Esser Co., Westphalia, Hamburg, 45 rolls.
E. Dietzgen & Co., Westerdyk, Rotterdam, 22 cs.
C. Steiner, Westerdyk, Rotterdam, 47 cs.
Keuffel & Esser Co., Deutschland, Hamburg, 60 rolls.
F. L. Kramer, American Trader, London, 3 cs.
Gallagher & Ascher, American Trader, London, 2 cs.
P. C. Zuhlke, Samland, Antwerp, 34 cs.
C. Bruning & Co., Vincent, Havre, 23 cs.

WRAPPING PAPER

Ellermans' Wilson Line, City of Winnipeg, Antwerp, 50 bls.
Downing & Co., City of Winnipeg, Antwerp, 50 bls.
Birn & Wachenheim, Samland, Antwerp, 70 cs.
Standard Products Corp., Samland, Antwerp, 15 rolls, 2 cs.

PACKING PAPER

International Forwarding Co., Berlin, Bremen, 8 cs.
Haule Wax Paper Manfg. Co., Westphalia, Hamburg, 5 cs.
J. P. Heffernan Paper Co., Samland, Antwerp, 205 bls.

COLORED PAPER

Phoenix Shipping Co., Berlin, Bremen, 3 cs.
S. Gilbert, Berlin, Bremen, 26 cs.
Whiting & Patterson Co., Inc., Berlin, Bremen, 4 cs.
Universal Car Loading Co., Berlin, Bremen, 12 cs.

DECALCOMANIA PAPER

C. W. Sellers, Deutschland, Hamburg, 14 cs.
Phoenix Shipping Co., Deutschland, Hamburg, 2 cs.
B. F. Drakenfeld & Co., Lancastria, Liverpool, 15 cs. (duplex).
B. F. Drakenfeld & Co., Lancastria, Liverpool, 6 cs. (simplex).

LITHO PAPER

B. Meiners, Tatsuno Maru, Hong Kong, 20 cs.
Ault & Wiborg, Tatsuno Maru, Hong Kong, 5 cs.

PARCHMENT PAPER

Walker, Goulard, Plehn Co., Deutschland, Hamburg, 7 bls.
Dingelstedt & Co., Deutschland, Hamburg, 7 cs.

WRITING PAPER

American Express Co., MacKeesport, Havre, 4 cs.
Globe Shipping Co., Aquitania, Southampton, 2 cs.
American Express Co., Vincent, Havre, 3 cs.
W. J. Burnes, Vincent, Havre, 3 cs.

PHOTO PAPER

J. H. Schroeder Banking Corp., Berlin, Bremen, 7 cs.

GOLD COATED PAPER

F. Murray Hill, Berlin, Bremen, 5 cs.

BARYTA COATED PAPER

J. H. Schroeder Banking Corp., Berlin, Bremen, 42 cs.

SURFACE COATED PAPER

P. C. Zuhlke, Berlin, Bremen, 84 cs.
Phoenix Shipping Co., Westphalia, Hamburg, 33 cs.
Hensel, Bruckman & Lorbacher, Deutschland, Hamburg, 1 cs.
Phoenix Shipping Co., Deutschland, Hamburg, 2 cs.
P. C. Zuhlke, Samland, Antwerp, 17 cs.
Gevaert Co. of America, Samland, Antwerp, 48 cs.

DRAWING PAPER

Keuffel & Esser Co., Westphalia, Hamburg, 57 cs.
H. Reeve Angel & Co., Inc., Megantic, Liverpool, 5 cs.
Keuffel & Esser Co., Deutschland, Hamburg, 37 cs.

FILTER PAPER

C. Schleicher Schull Co., Westphalia, Hamburg, 18 cs.
H. Reeve Angel & Co., Inc., Megantic, London, 9 cs.
H. Reeve Angel & Co., Inc., Aquitania, Southampton, 17 cs., 105 bls.

MARBLE PAPER

Borden Riley Paper Co., Samland, Antwerp, 6 cs.

TISSUE PAPER

Old Master Paper & Pulp Co., Deutschland, Hamburg, 36 cs.
G. W. Sheldon & Co., Amer. Trader, London, 3 cs.
F. C. Strype, Innaren, ——, 18 cs.
F. B. Vandegrift & Co., Lancastria, Liverpool, 5 cs.

GUMMED PAPER

M. Pressner & Co., MacKeesport, Havre, 4 cs.

PITH PAPER

Nosawa & Co., Havana Maru, Keelung, 2 cs.

STENCIL PAPER AND INK

Arlac Dry Stencil Co., Westphalia, Hamburg, 95 cs.
Arlac Dry Stencil Co., Deutschland, Hamburg, 81 cs.

PIGMENT PAPER

Murphy & Co., Deutschland, Hamburg, 1 cs.

TRANSPARENT GREASEPROOF PAPER

Central Union Trust Co., Deutschland, Hamburg, 25 cs.

COPYING PAPER

Corn Exchange Bank, Havana Maru, Kobe, 25 cs.

RAW PAPER

American Express Co., Deutschland, Hamburg, 58 cs.

TRUNK PAPER

P. H. Petry & Co., Duetschland, Hamburg, 2 cs.

STRAW BOARDS

Walker, Goulard, Plehn Co., Tomalva, Rotterdam, 159 rolls.

STRAW PAPER

American Express Co., Yuri Maru, Hamburg, 36 bls.

MISCELLANEOUS PAPER

Hensel, Bruckman & Lorbacher, Berlin, Bremen, 4 cs.
Souvenir Import Co., Rigel, Marseilles, 19 cs.
Globe Shipping Co., Westerdyk, Rotterdam, 39 cs.
Heemsoth Basse & Co., Westerdyk, Rotterdam, 25 bls.
C. K. MacAlpine & Co., Drottningholm, Gothenburg, 224 bls.
E. H. Sargent & Co., Drottningholm, Gothenburg, 16 cs.
Favor, Ruhl & Co., Pres. Hayes, Genoa, 9 cs.
H. Reeve Angel & Co., Inc., Tatsuno Maru, Nagoya, 9 cs.

RAGS, BAGGINGS, ETC.

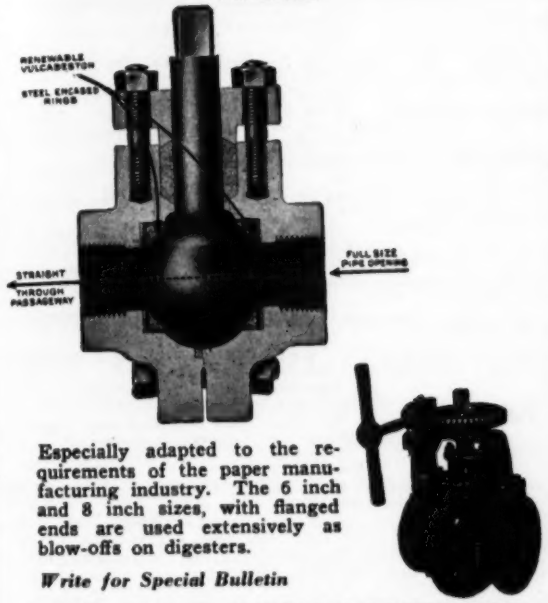
Whaling Waste Products Co., Exchange, Genoa, 82 bls. cotton waste.
Leigh Textile Co., Exchange, Genoa, 93 bls. cotton waste.
Overton & Co., Exchange, Naples, 194 bls. rags.
Overton & Co., City of Winnipeg, Antwerp, 184 bls. cotton waste.
W. Schall & Co., City of Winnipeg, Antwerp, 126 bls. bagging.
W. Schall & Co., City of Winnipeg, Antwerp, 17 bls. rags.
W. Searle, City of Winnipeg, Antwerp, 82 bls. rags.
Irving Trust Co., City of Winnipeg, Antwerp, 62 bls. rags.
Brown Bros. & Co., City of Winnipeg, Antwerp, 33 bls. rags.
Royal Manfg. Co., City of Winnipeg, Antwerp, 38 bls. cotton waste.
Katzenstein & Keene, Inc., City of Winnipeg, Antwerp, 57 bls. rags.
E. J. Keller Co., Inc., City of Winnipeg, ——, 56 bls. linen threads.
Salomon Bros. & Co., MacKeesport, Dunkirk, 71 bls. rags.
Katzenstein & Keene, Inc., MacKeesport, Dunkirk, 188 bls. rags.
Darmstadt, Scott & Courtney, MacKeesport Dunkirk, 50 bls. rags.
American Express Co., MacKeesport, Dunkirk, 30 bls. rags.
M. Halle, MacKeesport, Havre, 5 bls. rags.
B. D. Kaplan, MacKeesport, Havre, 19 bls. rags.
S. Birkenstein & Sons, Rigel, Marseilles, 94 bls. rags.
Overton & Co., Westerdyk, Rotterdam, 114 bls. cotton waste.
A. Bloch & Co., Westerdyk, Rotterdam, 28 bls. rags.
International By-Products Co., Westerdyk, Rotterdam, 42 bls. bagging.
Chemical National Bank, Westerdyk, Rotterdam, 39 bls. rags.
Guaranty Trust Co., Explorer, Bari, 152 bls. rags.
E. J. Keller Co., Inc., Explorer, ——, 7 bls. rags.
S. Birkenstein & Sons, Cabo Torres, Bilbao, 109 bls. rags.
Union Bank & Trust Co., Cabo Torres, Santander, 62 bls. rags.
Bank of The Manhattan Co., Regina, Liverpool, 53 bls. rags.
Darmstadt, Scott & Courtney, Vincent, Dunkirk, 49 bls. rags.
J. Cohen Son, Inc., Vincent, Dunkirk, 30 bls. rags.
V. Galaup, Vincent, Havre, 164 bls. rags.
V. Galaup, Vincent, Havre, 129 bls. strings.
A. Bloch & Co., Hoxie, Manchester, 40 bls. rags.
Castle & Overton, Inc., Hoxie, Manchester, 55 bls. bagging.
Leigh Textile Co., Hoxie, Manchester, 42 bls. cotton waste.
Hill & Cutler Co., Hoxie, Manchester, 50 bls. cotton waste.
E. Butterworth & Co., Inc., Hoxie, Manchester, 145 bls. bagging.
Banco Com'l Italiane Trust Co., Hoxie, Manchester, 66 bls. new cuttings.
Banco Com'l Italiane Trust Co., Hoxie, Manchester, 186 bls. cotton waste.
E. J. Keller Co., Inc., Hoxie, ——, 85 bls. bagging.
Castle & Overton, Inc., Lancastria, Liverpool, 163 bls. flax waste.

(Continued on page 78)

FAIRBANKS' "SPHERO"

The Perfect "Blow-Off" Valve

PATENTED



Especially adapted to the requirements of the paper manufacturing industry. The 6 inch and 8 inch sizes, with flanged ends are used extensively as blow-offs on digesters.

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The ideal pipe for exhaust steam heating and process...

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Great flexibility in layout and a wide range of special fittings simplifies many difficult problems.

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BROWN COMPANY'S ALPHA GRADES

of Purified Cellulose Fibre representing some of the valuable results of our many years of research in cellulose chemistry.

SUPER ALPHA

for strength in Tear, Fold and Mullen. Super Alpha equals the higher grades of rags in the manufacture of fine papers.

EASY-BEATING ALPHA

This is a grade developed for mills of limited beating capacity. While not giving results equal to Super Alpha, it produces wonderful paper on short beating.

REGULAR ALPHA

This is a grade midway between Super and Easy-Beating.

Use ALPHA for Quality

BROWN COMPANY FOUNDED 1883 Portland, Maine

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Manufacturers of

SUPERCALENDERED and MACHINE FINISHED BOOK and LITHOGRAPHIC PAPERS

Offset, Envelope, Bond, Writing, Cover and Music Paper, High Grade Coated Book, Index Bristol, Post Card, Kraft and Label Papers.

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Bleached Spruce Sulphite and Soda, Kraft Pulp

200 Fifth Avenue New York — 35 East Wacker Drive Chicago

308 Market St., San Francisco, Cal.

Sixth and Chestnut Sts., Philadelphia, Pa.

Imports of Paper and Paper Stock

(*Continued from page 76*)

Chemical National Bank, Yuri Maru, Hamburg, 42 bls. rags.
Castle & Overton, Inc., Caledonia, Glasgow, 77 bls. bagging.
The Barrett Co., Caledonia, Glasgow, 104 bls. paper stock.
A. H. Searle, Inc., Caledonia, Glasgow, 35 bls. rags.
Brown Bros. & Co., Caledonia, Glasgow, 188 bls. rags.
C. R Spence, Caledonia, Glasgow, 32 bls. rags.

OLD ROPE

International Purchasing Co., Exchange, Genoa, 409 coils.
Brown Bros. & Co., West Eldara, Rotterdam, 126 coils.
W. Steck & Co., MacKeesport, Havre, 60 coils.
American Rag Trading Co., MacKeesport, Havre, 3 bales.
Brown Bros. & Co., Rigel, Genoa, 178 coils.
Brown Bros. & Co., Westphalia, Hamburg, 37 coils.
Brown Bros. & Co., Tomalva, Rotterdam, 57 coils.
Brown Bros. & Co., Deutschland, Hamburg, 32 coils.
A. W. Fenton, Inc., Caledonia, Glasgow, 112 coils.

CASEIN

D. C. Andrews & Co., Deutschland, Hamburg, 155 bags, 6,107 kilos.
A. Klipstein & Co., Vincent, Havre, 248 bags, 24,800 kilos.

WOOD PULP

E. J. Keller Co., Inc., Berlin, ——, 204 bls. wood pulp.
E. J. Keller Co., Inc., Republic, ——, 711 bls. wood pulp.
Farmers Loan & Trust Co., Stavangerfjord, Oslo, 800 bls. sulphite.
Atterbury Bros., Inc., Stavangerfjord, Oslo, 500 bls. wood pulp.
E. M. Sergeant & Co., Stavangerfjord, Oslo, 160 bls. wood pulp.
Chemical National Bank, Stavangerfjord, Oslo, 600 bls. sulphite.
—— —— ——, Innaren, Sweden, 1,690 bls. wood pulp.
Perkins Goodwin & Co., Drottningholm, Gothenburg, 1,234 bls. kraft pulp.
Perkins Goodwin & Co., Drottningholm, Gothenburg, 50 bls. sulphite.

WOOD PULP BOARDS

C. K. MacAlpine & Co., Drottningholm, Gothenburg, 6 bls.
Chatham & Phoenix National Bank, Drottningholm, Gothenburg, 66 bls.

WOOD PULP WADDING

Birn & Wachenheim, Westerdyk, Rotterdam, 50 bls.
Bendix Paper Co., Westerdyk, Rotterdam, 30 bls.

WOOD FLOUR

H. J. Baker & Bro., Westerdyk, Rotterdam, 1,500 bags.
State Chemical Co., Westerdyk, Rotterdam, 40 bags.
The Burnet Co., Drottningholm, Gothenburg, 339 bags.

NORFOLK IMPORTS

WEEK ENDING MARCH 23, 1929

Old Dominion Paper Co., Innaren, ——, 130 bls., 74 rolls paper.
Virginian Publishing Co., Innaren, ——, 67 rolls paper.
H. Reeve Angel & Co., Inc., Innaren, ——, 50 rolls paper.
Virginian & Pilot Publishing Co., Innaren, ——, 241 rolls paper.
Lagerloef Trading Co., Innaren, ——, 2,649 bls. wood pulp.

PHILADELPHIA IMPORTS

WEEK ENDING MARCH 23, 1929

D. I. Murphy, Exchange, Leghorn, 241 bls. rags.
D. I. Murphy, MacKeesport, Dunkirk, 143 bls. rags.
F. Whitaker, MacKeesport, Dunkirk, 4 bls. rags.
C. B. Richard & Co., MacKeesport, Dunkirk, 113 bls. rags.
G. Mathes Co., MacKeesport, Dunkirk, 104 bls. rags.
Salomon Bros. & Co., MacKeesport, Dunkirk, 220 bls. rags.
M. Specter, MacKeesport, Dunkirk, 47 bls. rags.
J. M. Hagy Waste Works, MacKeesport, Dunkirk, 80 bls. rags.
Katzenstein & Keene, Inc., MacKeesport, Dunkirk, 329 bls. rags.
A. Hurst & Co., MacKeesport, Havre, 71 bls. rags.
W. Steck & Co., MacKeesport, Havre, 57 coils old rope.
Salomon Bros. & Co., MacKeesport, Havre, 238 bls. rags.
V. Galaup, MacKeesport, Havre, 135 bls. rags.
Katzenstein & Keene, Inc., MacKeesport, Havre, 123 bls. rags.
F. Weber & Co., Rigel, Genoa, 13 cs. paper.
Banco Com'l Italiane Trust Co., Rigel, Leghorn, 225 bls. rags.
D. I. Murphy, Rigel, Leghorn, 72 bls. rags.
E. J. Keller Co., Inc., Rigel, ——, 61 bls. rags.
J. B. Moors & Co., London Shipper, London, 163 bls. rags.
Neidich Process Co., Innaren, ——, 92 cs. tissue paper.
Paper Manufacturers Co., Inc., Innaren, ——, 68 rolls paper.
Castle & Overton, Inc., Tatsuno Maru, Osaka, 187 bls. rags.
Castle & Overton, Inc., Vermont, France, 207 bls. rags.
Castle & Overton, Inc., Koeln, Germany, 92 bls. rags.
Castle & Overton, Inc., Ammon, Germany, 178 bls. rags.
Castle & Overton, Inc., Estrella, Spain, 232 bls. rags.
Bulkley, Dunton & Co., Carlsholm, ——, 900 bls. wood pulp.

BALTIMORE IMPORTS

WEEK ENDING MARCH 23, 1929

Congoleum Nairn Co., Exchange, Genoa, 184 bls. rags.
Congoleum Nairn Co., Exchange, Leghorn, 331 bls. rags.
Congoleum Nairn Co., Exchange, Naples, 111 bls. rags.
United Rag & Paper Exchange, Vincent, Dunkirk, 23 bls. rags.
Congoleum Nairn Co., Vincent, Dunkirk, 163 bls. rags.
E. J. Keller Co., Inc., Beemsterdyk, ——, 300 bls. wood pulp.

BOSTON IMPORTS

WEEK ENDING MARCH 23, 1929

G. F. Malcolm, Lancastria, Liverpool, 35 cs. carbonizing tissue.
E. S. Webster & Co., Inc., Lancastria, Liverpool, 7 cs. carbonizing tissue.
G. M. Graves Co., Maryland, London, 155 bls. rags.
Brown Bros. & Co., Maryland, London, 333 bls. waste paper.
Brown Bros. & Co., Maryland, London, 126 bls. old rope.
H. O. Houghton Co., Maryland, London, 3 cs. printing paper.
Crocker Burbank Co., Maryland, London, 875 bls. waste paper.
E. J. Keller Co., Inc., Binnendyk, ——, 65 bls. rags.
Bulkley, Dunton & Co., Beemsterdyk, ——, 282 bls. wood pulp.

Pacific Mills Make Improvements

[FROM OUR REGULAR CORRESPONDENT]

VANCOUVER, B. C., March 21, 1929.—Considerable additions will be made to the plant of Pacific Mills, Ltd., at Ocean Falls, B. C., this year. The big pulp and paper mill has been compelled to close down its kraft and news print sections owing to water scarcity, and one of the immediate improvements will be the raising of the height of the storage dam to lessen the possibility of a similar shortage occurring again. Steel has already commenced to arrive for this work, and the project is being rushed with all possible speed.

A new steam turbine will also be purchased and installed this spring at Ocean Falls. A new grinder room will also be erected.

The construction program will also include several new buildings, as well as additional machinery installation.

Pulp and Paper Mills of Norway Busy

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., March 27, 1929.—The pulp and paper industries of Norway are active with prices firm according to a cablegram from Commercial Attache H. M. Lund, at Oslo. January exports of pulp and paper amounted to 28,000 tons of chemical pulp, 56,200 tons of mechanical pulp, 14,000 tons of news print and 12,000 tons of other classes of paper. News print production for the year 1928 is reported to have reached approximately 180,000 tons.

Wood Pulp Rates to Albany Not Unreasonable

WASHINGTON, D. C., March 27, 1929.—Rates on wood pulp, in carloads, from Boston to certain destinations on the Boston & Albany Railroad have not been found unreasonable by the Interstate Commerce Commission in a decision in the case of the Albany Perforated Wrapping Paper Company against the Boston & Albany Railroad.

Rates on wood pulp from Albany to the same destinations were found unreasonable and reasonable rates were prescribed for the future and reparation awarded.

Sitka Paper Mill Expansion

PORTLAND, ORE., March 21, 1929.—C. M. Johnson, who now has a new plant for the Sitka Spruce Pulp and Paper Company under construction at Empire, Ore., has announced that he will start at once building a new spruce saw mill on a site near the former plant to be completed at about the same time that the pulp and paper mill is ready. The saw mill will be run in conjunction with the paper factory and will have a capacity of 125,000 feet daily.

Bids for Government Paper

WASHINGTON, D. C., March 27, 1929.—The Government Printing Office will receive bids on April 1 for 23,100 pounds (150,000 sheets) of 24 x 38—134 75 per cent rag laid antique book paper.

KELLOGG

Forge and Hammer Lap Welded

DIGESTERS

POWER PLANT PIPING — SEPARATORS
FORGE WELDED PIPE — RECEIVERS —
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The M. W. KELLOGG Co., 7 DEY ST., N. Y. C.
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All Kellogg Forge and Hammer Welded Products are insurable

RAGS—BURLAP—BAGGING—ROPE

JUTE BUTTS, MAGAZINES, CATALOGS, OLD PAPERS, THREAD WASTE AND ALL GRADE OF RAGS CUT QUICKLY AND EFFICIENTLY WITH THE

GIANT The Standard of the World for 59 Years

Giant Rag Cutters have capacities of from 1 to 5 tons per hour

This is the GIANT 3-B CUTTER WITH A CAPACITY OF 3000 lbs. PER HOUR

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Central Paper Co., Muskegon, Mich., four orders, total ..... 3100 H.P.
Philadelphia Paper Mfg. Co., Phila., three orders, total ..... 2400 H.P.
Jessup & Moore Paper Co., Phila., four orders, total ..... 4750 H.P.
Ontario Paper Co., Ltd.
For Daily Newspaper Co., North Tonawanda, N. Y. ..... 2034 H.P.
Filer Fibre Company, Filer City, Mich. ..... 1500 H.P.
John Lang Paper Co., Philadelphia, Pa. ..... 416 H.P.
Bayless Manufacturing Corp., Austin, Pa. ..... 1300 H.P.
Northern Board & Paper Co., San Francisco, Cal., two orders, total ..... 400 H.P.
Crown Williamette Paper Co., San Francisco, Cal., two orders, total ..... 750 H.P.
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MONTREAL, P. Q.

New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, March 27, 1929.

Trading in the local paper market was fairly active during the past week and practically all of the various grades of paper were in persistent demand. Reports from the sales organizations of the leading paper houses are still optimistic and the outlook for the immediate future is promising. Prices are generally being well maintained and shading is infrequent.

Supplies of news print are moving into consumption in excellent volume. In the opinion of many observers, conditions in the news print industry should gradually improve now that the manufacturers have agreed to curtail production. The recent stabilization of prices is also a favorable factor in the situation.

Production of paper board is being maintained in satisfactory volume. Demand is well up to average for the season but quotations are still unsatisfactory. The fine paper market is exhibiting a strong undertone and prices are holding to schedule. The coarse paper market is more active and kraft wrapping paper, in particular, is in steady request. The recently advanced prices are being maintained, in most instances.

Mechanical Pulp

The ground wood market was moderately active during the week. Despite the restriction on production effective abroad, accumulations are apparently large enough to cope with the prevailing demand. Inquiries for future business are fairly numerous at present. Prices are generally holding to schedule without difficulty.

Chemical Pulp

Steadiness prevails in the chemical pulp industry and the undertone of the market continues strong. Bleached sulphite maintains its firm standing. Unbleached sulphite is also in a sound position. No. 1 imported strong unbleached sulphite is now selling at from $2.60 to $2.80, ex dock, Atlantic ports. Domestic bleached soda is arousing more interest and is now quoted at from $3.25 to $3.40.

Old Rope and Bagging

Demand for old rope is unusually persistent and prices have again advanced. Imported manila rope is now selling at from $4.25 to $4.50, while domestic manila rope is offered at from $4.50 to $4.75. Small mixed rope is practically unchanged. Some improvement was also noticed in the bagging market and prices of the different grades are decidedly firmer.

Rags

Paper mill interest in the domestic rag market is showing signs of improvement. Cotton cuttings are in particularly good request and quotations are generally firmer. Roofing grades are also in heavy demand at present. The imported rag market is displaying a stronger tendency and quotations on several of the grades have advanced.

Waste Paper

Although demand for the lower grades of paper stock from the board mills has fallen off slightly, the waste paper market is still in a fairly satisfactory position. Book stock and ledger stock are moving in a normal manner for the season. Shavings have been moderately active. Old kraft paper is still moving rather slowly.

Twine

Conditions in the twine market are favorable at present, due to some extent to the increased demand for wrappng paper for Spring and Easter requirements. The prices of the various grades of twine are generally being maintained at the levels which have prevailed for some considerable time past and there is little talk of concessions around.

Sale of National Coated Paper Corp. Authorized

PROVIDENCE, R. I., March 25, 1929.—Sale of the National Coated Paper Corporation of Pawtucket to a newly formed company, known as the T. L. P. Corporation, which will assume responsibility for payment in full to creditors of the N. S. P. Corporation, which has been in receivership for some time, was authorized by Judge Tanner in Superior Court.

Entry of decree to that effect was objected to by Attorney Albert B. West, counsel for J. M. Salomon, a former official of the National Coated Paper Corporation. Mr. Salomon had objected to the plan since it was first suggested to the court several weeks ago, and had been granted a continuance for him to present a more satisfactory way of settling the affairs of the insolvent corporation which he did not do. Mr. West intimated he intends to appeal the decree.

The decree authorizes payment of $15,000 to Arthur A. Thomas for his services as receiver; $5,000 to Percy W. Gardner, counsel, and a dividend of 30 per cent to creditors.

A previous dividend of 20 per cent had been paid and the balance will be in installments by the T. L. P. Corporation. Armington G. Post, factory manager of the paper company, is president of the new corporation, Samuel Bachman vice president and Thomas secretary and treasurer.

Foremen Hold Safety Dinner at Niagara Falls

NIAGARA FALLS, N. Y., March 27, 1929.—The annual safety dinner of the foremen of the Niagara Wall Paper Company and the Defiance Paper Company, both with mills at Niagara Falls, N. Y., was held in the Y. M. C. A. on First street, Saturday evening, March 16. There was a representative attendance from both organizations. The Niagara company won fourth place in the last annual safety contest conducted by the Associated Industries, and a certificate was presented to William Huntsman, general foreman of the company, during the evening. The presentation speech was made by G. M. Uptegraff, assistant general manager of the Defiance company. Mr. Uptegraff also presented the Niagara company with a handsome bronze placque, which was won in the intermill contest. The dinner was an enjoyable repast; all decorations were in green in commemoration of St. Patrick's Day.

Making a Profit

Dedicated to executives everywhere, L. V. Estes, industrial engineers, of 4753 Broadway, Chicago, Ill., have just issued a handsomely bound and beautifully printed book entitled "Making a Profit."

To secure net profits, the importance of analyzing carefully, planning constructively and acting aggressively is stressed. Every move is gauged by its effects upon the profits. It is the purpose of this organization to give better service and to make greater savings for clients than is promised or expected.

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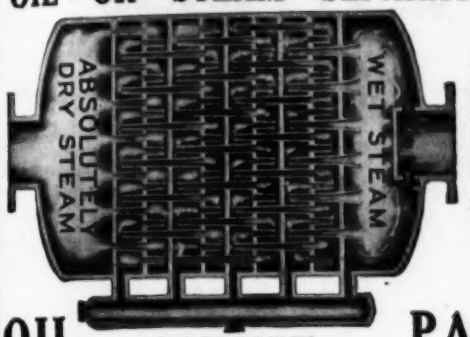

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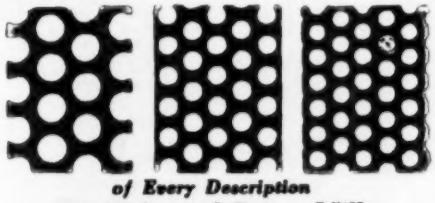

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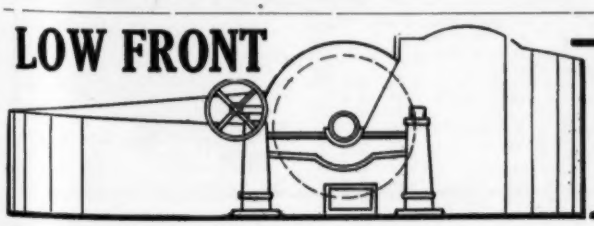

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Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, March 27, 1929.

BLANC FIXE.—No radical changes were reported in the blanc fixe market. Both the pulp and the powder are in seasonal request. The pulp is still quoted at from $42.50 to $45.00 per ton, in bulk, while the powder is selling at from 3¾ cents to 4½ cents per pound, in barrels, at works.

BLEACHING POWDER.—The bleaching powder market is in a sound position. Contract shipments are moving with regularity. Prices are generally holding to previously recorded levels. Bleaching powder is still quoted at from $2.00 to $2.35 per 100 pounds, in large drums, at works, according to grade.

CASEIN.—Steadiness prevails in the casein market. Prices are well maintained. Domestic casein is quoted at from 16 cents to 16¼ cents per pound, while standard ground imported is still selling at 16 cents per pound and finely ground at 16¼ cents per pound, all in bags, car lot quantities.

CAUSTIC SODA.—Demand for caustic soda is persistent. The contract movement is well up to average. Prices remain unaltered. Solid caustic soda is quoted at from $2.90 to $2.95, while the flake and the ground are still selling at from $3.30 to $3.35 per 100 pounds, in large drums, at works.

CHINA CLAY.—Most of the business transacted in the china clay market during the past week was along routine lines. Prices remain unchanged. Imported china clay is quoted at from $15 to $25 per ton, ship side, while domestic paper making clay is selling at from $8 to $13 per ton, at mine.

CHLORINE.—The chlorine market is exhibiting a strong undertone. Prices are holding to schedule without difficulty. Chlorine is quoted at 3 cents per pound, in tanks, or multi-unit cars, at works, on standard contracts. The spot quotation ranges from 3¼ cents to 3½ cents per pound.

ROSIN.—Some improvement was noticed in the rosin market. At the naval stores, the grades of gum rosin used in the paper mills are quoted at from $8.70 to $9.45 per 280 pounds, ex dock, in barrels. Wood rosin is selling at from $6.75 to $7.55 per 280 pounds, in barrels, at southern shipping points.

SALT CAKE.—Offerings of salt cake are rather limited at present and the market is decidedly firm as a result. The contract movement is satisfactory. Salt cake is still quoted at from $16 to $18 per ton, while chrome salt cake is selling at from $14 to $15 per ton, in bulk, at works.

SODA ASH.—Production of soda ash is being maintained in excellent volume and the output is being freely absorbed. Prices are holding to previously quoted levels. Contract quotations on soda ash, in car lots, at works, per 100 pounds, are as follows: in bags, $1.32½, and in barrels, $1.55.

STARCH.—Conditions in the starch market are practically unchanged. Shipments against contract are going forward in normal volume. Prices remain steady and unaltered. Special paper making starch is still quoted at $3.82 per 100 pounds, in bags, and at $3.99 per 100 pounds, in barrels.

SULPHATE OF ALUMINA.—The sulphate of alumina market was fairly active during the past week. Prices are holding to schedule without difficulty. Commercial grades of sulphate of alumina are quoted at from $1.40 to $1.55, and iron free at from $1.95 to $2.05 per 100 pounds, in bags, at works.

SULPHUR.—Supplies of sulphur are going forward at an excellent pace. Prices are unchanged. Sulphur is quoted at $18 per ton, in lots of 1,000 tons, or over, on yearly contracts, and at $20 per ton for any smaller quantity over that period. On spot and nearby car loads, the quotation is $21 per ton.

TALC.—The talc market was moderately active, although most of the business transacted was routine. Prices are holding to the levels previously quoted. Domestic talc is selling at from $16 to $18 per ton, at eastern mines, while imported talc is offered at from $18 to $20 per ton, ship side.

Market Quotations

Paper

(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub sized	10.00	@15.00
Engine sized	8.00	@11.00

(Delivered New York)

News—		
Rolls, contract	62.00	@ —
Rolls, spot	62.00	@ —
Sheets	67.00	@ —
Side Runs	47.00	@52.00
Book, Cased—		
S. & S. C.	6.00	@ 7.50
M. F.	5.75	@ 7.00
Coated and Enamel	7.50	@12.00
Lithograph	7.50	@12.00
Tissues—Per Ream—		
White No. 1	.75	@ 1.00
Anti-Tarnish	1.35	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.75	@ .80
Kraft	1.00	@ 1.10
Manila	.75	@ .80
Kraft—		
No. 1 Domestic	6.25	@ 6.50
No. 2 Domestic	5.25	@ 5.50
Southern	4.25	@ 4.50
Imported	6.50	@ 7.00
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	5.00	@ 5.50
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.75	@ 3.00
Screenings	3.00	@ 3.25
Card Middles	4.00	@ 5.00
Glassine—		
Bleached, basis 25 lbs	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00

(Delivered New York)

Boards—per ton—		
News	32.00	@39.50
Straw	52.50	@55.00
Chip	30.00	@37.50
Binders' Boards	65.00	@67.50
Sgl. Mla. Ll. Chip	44.00	@47.50
Wood Pulp	80.00	@85.00
Container	52.50	@55.00
85 Test Jute Liner	47.50	@53.00

Mechanical Pulp

(Ex-Dock)

No. 1 Imported—		
Moist	28.00	@31.25
Dry	32.00	@34.00

(F. o. b. Mill)

No. 1 Demestic	26.00	@29.00
Screenings	15.00	@20.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.75	@ 4.40
Easy Bleaching	2.85	@ 2.90
No. 1 strong unbleached	2.60	@ 2.80
Mitscherlich unbleached	2.60	@ 3.25
No. 2 strong unbleached	2.40	@ 2.50
No. 1 Kraft	2.50	@ 2.75
No. 2 Kraft	2.40	@ 2.50
Sulphate—		
Bleached	375	@ 3.85

(F. o. b. Pulp Mill)

Sulphite (Domestic)—		
Bleached	3.40	@ 4.75
Easy Bleaching Sulphite	2.60	@ 2.75
News Sulphite	2.40	@ 2.50
Mitscherlich	3.00	@ 3.25
Kraft (Domestic)	2.50	@ 3.30
Soda Bleached	3.25	@ 3.40
Sulphate Screenings—		
Coarse	.75	@ .95
Refined	1.50	@ 1.65

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—		
New White, No. 1	11.00	@11.50
New White, No. 2	8.00	@ 8.50
Silesias No. 1	7.50	@ 8.00
New Unbleached	11.00	@11.50
Washables	4.50	@ 5.00
Fancy	5.50	@ 6.00
Blue Overall	7.00	@ 7.50
New Blue Prints	5.25	@ 5.50
New Soft Blacks	5.25	@ 5.75
Mixed Khaki Cuttings	4.75	@ 5.25
Pink Corset Cuttings	8.00	@ 8.50
O. D. Khaki Cuttings	5.15	@ 5.75
Men's Corduroy	3.75	@ 4.25
New Mixed Blacks	3.50	@ 3.75

Old Rags

White, No. 1—		
Repacked	5.50	@ 6.00
Miscellaneous	4.50	@ 5.00
White, No. 2—		
Repacked	3.00	@ 3.50
Miscellaneous	2.50	@ 2.75
St. Soiled, White	2.00	@ 2.15
Thirds and Blues—		
Repacked	2.25	@ 2.50
Miscellaneous	1.75	@ 2.00
Black Stockings	3.25	@ 3.75
Roofing Rags—		
Cloth Strippings	1.70	@ 1.80
No. 1	1.70	@ 1.80
No. 2	1.55	@ 1.65
No. 3	1.30	@ 1.40
No. 4	1.25	@ 1.35
No. 5A	.90	@ 1.05

Foreign Rags

New Rags

New Dark Cuttings	2.50	@ 3.00
New Mixed Cuttings	2.75	@ 3.25
New Light Silesias	7.00	@ 7.50
Light Flannelettes	7.50	@ 8.00
Unbleached Cuttings	10.00	@11.00
New White Cuttings	10.50	@11.50
New Light Oxfords	7.00	@ 7.50
New Light Prints	5.50	@ 6.50

Old Rags

No. 1 White Linens	7.25	@ 8.00
No. 2 White Linens	5.50	@ 6.25
No. 3 White Linens	4.50	@ 5.00
No. 4 White Linens	3.00	@ 3.50
No. 1 White Cotton	5.50	@ 6.50
No. 2 White Cotton	4.50	@ 5.50
No. 3 White Cotton	3.00	@ 4.00
No. 4 White Cotton	1.90	@ 2.15
Extra Light Prints	2.75	@ 3.25
Ord. Light Prints	2.25	@ 2.50
Med Light Prints	1.90	@ 2.10
Dutch Blue Cottons	2.20	@ 2.40
French Blue Linens	2.75	@ 2.85
German Blue Linens	2.35	@ 2.55
German Blue Cottons	2.15	@ 2.25
Checks and Blues	1.85	@ 2.00
Lindsay Garments	1.90	@ 2.00
Dark Cottons	1.65	@ 1.70
Old Shopperies	1.55	@ 1.60
New Shopperies	1.50	@ 1.60
French Blues	2.10	@ 2.25

Old Rope and Bagging

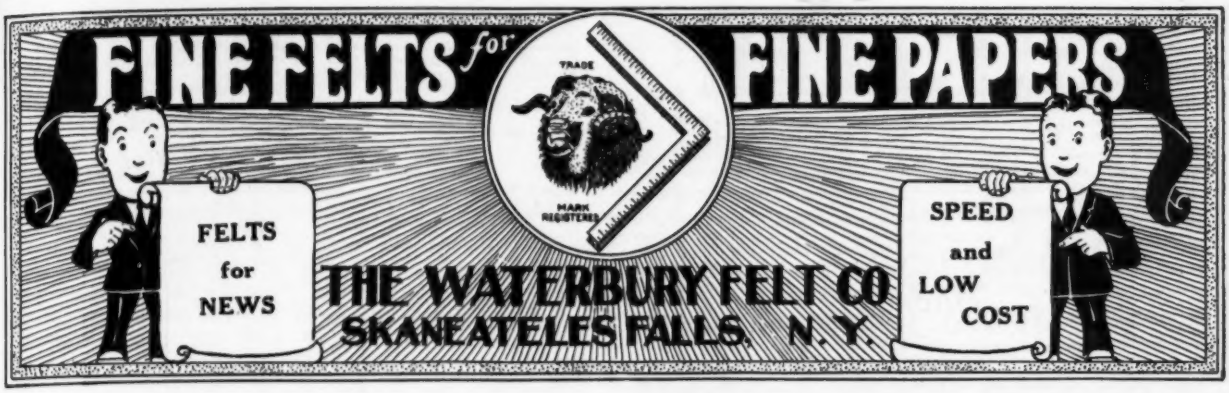
(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—		
Foreign	1.65	@ 1.75
Domestic	1.70	@ 1.75
Wool Tares, light	1.60	@ 1.65
Wool Tares, Heavy	1.65	@ 1.75
Bright Bagging	1.65	@ 1.70
Small Mixed Rope	1.25	@ 1.40
Manila Rope—		
Foreign	4.25	@ 4.50
Domestic	4.50	@ 4.75
New Burlap Cut	2.75	@ 3.00
Hessian Jute Threads—		
Foreign	3.50	@ 4.00
Domestic	3.25	@ 3.50

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, white, No. 1	3.25	@ 3.50
Hard, white, No. 2	2.40	@ 2.55
Soft, White, No. 1	2.50	@ 2.60
White envelope cuttings	3.25	@ 3.50
Flat Stock—		
Stitchless	1.60	@ 1.70
Overissue Mag	1.60	@ 1.70
Solid Flat Book	1.50	@ 1.60
Crumpled No. 1	1.15	@ 1.25
Solid Book Ledger	2.00	@ 2.10
Ledger Stock	1.70	@ 1.80
New B. B. Chips	.65	@ .75
New Env. Cut	2.40	@ 2.60
Manilas—		
New Cuttings	1.60	@ 1.85
Extra No. 1 old	1.25	@ 1.35
Print	.75	@ .80
Container	.60	@ .65
Bogus Wrapper	.75	@ .85
Old Kraft Machine Compressed bales	1.75	@ 1.85
News—		
No. 1 White News	1.70	@ 1.75
Strictly Overissue	.85	@ .95
Strictly Folded	.65	@ .70
No. 1 Mixed Paper	.50	@ .55
Common Paper	.30	@ .35



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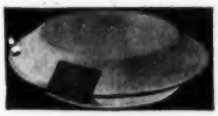

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Paper Bag Machinery

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Twines

F. o. b. Mill)

Cotton—			
No. 1	.39	@	.40
No. 2	.37	@	.38
No. 3	.36	@	.37
B. C., 18 basis	.38	@	.40
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrapping, 3-6 Ply—			
No. 1	.19	@	.21
No. 2	.18	@	.20
Tube Rope—			
4-ply and larger	.16	@	.17
Fine Tube Yarn—			
5-ply and larger	.21	@	.25
4-ply	.25	@	.29
3-ply	.28	@	.32
Unfinished India—			
Basis	.13	@	.14
Paper Makers Twine Balls	.11	@	.12
Box Twine, 2-3 ply	.15	@	.17
Jute Rope	.17	@	.19
Amer. Hemp. 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.16	@	.18
No. 2 Basis	.14	@	.16
Sisal Lath Yarn—			
No. 1	.14	@	.16
No. 2	.12	@	.14
Manila Rope	.22	@	.24

CHICAGO

All Rag Bond	.35	@	.41
No. 1 Rag Bond	.25	@	.34
No. 2 Rag Bond	.14	@	.25
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¾	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¾
No. 2 M. F. Book	.05¾	@	.06¾
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
News—Roll, mill	.03½	@	.04¼
News—Sheets, mill	.03¾	@	.04¾
No. 1 Manila	.04¼	@	.05¾
No. 1 Fibre	.04¾	@	.05¼
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	.06¼	@	.06½
Southern Kraft	.03¾	@	.04
No. 2 Kraft	.04	@	.04¼
Wood Tag Boards	.04¼	@	.06¼
Sulphite Screenings	.03	@	.03¼
Manila Tissue—			
24x36 Sheet	.07	@	.07¼
White Tissue—			
20x30 Sheet	.07¼	@	.07½
Boards, per ton— (Delivered Central Territory)			
Plain Chip	37.50	@	41.00
Solid News	47.50	@	—
Manila Lined Chip	55.00	@	—
Container Lined— (Delivered Central Territory)			
85 Test	65.00	@	70.00
100 Test	70.00	@	—

Old Papers

(F. o. b. Chicago)

Shavings—			
No. 1 Hard White	2.20	@	2.25
White Env. Cuttings	2.40	@	2.50
No. 1 Soft Shavings	2.00	@	2.10
No. 1 Mixed	.90	@	1.00
No. 2 Mixed	.70	@	.75
Ledger & Writings	1.45	@	1.50
Solid Books	1.25	@	1.40
Blanks	1.40	@	1.50
Krafts	1.60	@	1.75
New Kraft Cuts	2.15	@	2.25
Manila Envelope Cuttings	1.65	@	1.75
Ex. No. 1 Manila	1.30	@	1.45
Print Manila	.80	@	.85
Folded News (over-issue)	.80	@	.85
Old Newspapers—			
No. 1	.70	@	.80
No. 2	.65	@	.70
Mixed Papers—			
No. 1	.65	@	.70
Roofing Stocks— (F.o .b Chicago, net cash)			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper

(F. o. b. Mill)

Bonds	.06	@	.40
Ledgers	.09	@	.40
Writings—			
Superfine	.12½	@	.18
Extra fine	.18	@	.22
Fine	.17	@	.26
Fine, No. 2	.15	@	.25
Fine, No. 3	.10	@	.20
Book, M. F.	.05½	@	.07
Book, S. S. & C.	.06	@	.07½
Book, Coated	.09½	@	.16
Coated Lithograph	.07	@	.11
Label	.07	@	.11
News	.03½	@	.04
No. 1 Jute Manila	.08	@	.09
Manila Sul., No. 1	.04	@	.05½
Manila No. 2	.03	@	.04
No. 2 Kraft	.06	@	.06½
No. 1 Kraft	.06½	@	.07
Common Bogus	.03½	@	.04
Straw Board	52.50	@	75.00
News Board	38.00	@	42.00
Chip Board	35.00	@	40.00
Wood Pulp Board	85.00	@	95.00
(Carload Lots)			
Binder Boards—			
No. 1, per ton	75.00		
No. 2, per ton	70.00		
Carload lots	68.00	@	70.00
Tarred Felts—			
Regular	53.00	@	55.00
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.85	@	1.95
Best Tarred, 2-ply (per roll)	1.44	@	1.54
Best Tarred, 3-ply	1.83	@	2.08

Domestic Rags (New)

(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.10½	@	.11
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.08½	@	.09
Black Silesia, soft	.05	@	.05½
New Unbleached	.10½	@	.11
Washable, No. 1	.04½	@	.05
Blue Overall	.07½	@	.08
Fancy			
Cottons—According to grades—			
Washable, No. 2	.03	@	—
New Blue	.03	@	.03½
New Black Soft	.05	@	.05¾
New Light Seconds	.02½	@	.03
New Dark Seconds	1.85	@	2.00
Khaki Cuttings—			
No. 1 O. D.	.05½	@	.05¾
No. 2 Mixed	.04½	@	.04¾
Corduroy	.03	@	.03½
New Canvas	.08½	@	.09
New Black Mixed	.03¾	@	.04½

Bagging

(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.50	@	1.60
Domestic	1.75	@	—
Manila Rope	3.50	@	4.00
Sisal Rope	1.50	@	—
Mixed Rope	1.10	@	1.25
Scrap Burlaps—			
No. 1	1.50	@	1.60
No. 2	1.10	@	1.20
Wool Tares, heavy	3.00	@	—
Mixed Strings	1.15	@	1.25
No. 1, New Light Burlap	2.50	@	2.75
New Burlap Cuttings	2.00	@	2.25

Old Papers

(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	3.20	@	3.25
No. 2 Hard White	2.75	@	3.00
No. 1 Soft White	2.50	@	2.60
No. 2 Soft White	1.90	@	2.00
No. 1 Mixed	1.50	@	1.60
No. 2 Mixed	.90	@	1.00
Solid Ledger Stock	1.85	@	1.90
Writing Paper	1.60	@	1.65
No. 1 Books, heavy	1.45	@	1.55
No. 2 Books, light	1.20	@	1.25
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.60
Print Manila	.95	@	1.00
Container Manila	.85	@	.90
Old Kraft	2.25	@	2.50
Common paper	.50	@	.55
No. 1 Mixed Paper	.65	@	.70
Straw Board, Chip	.65	@	.70
Binders Board, Chip	.65	@	.70
Overissue News	.85	@	.90
Old Newspaper	.65	@	.70

Domestic Rags (Old)

White, No. 1—			
Repacked	4.25	@	4.50
Miscellaneous	3.50	@	3.75
White, No. 2—			
Repacked	.02½	@	.02¾
No. 2	1.30	@	1.35
No. 3 (Roofing)	1.15	@	1.25
No. 4	1.00	@	1.15
No. 5A	.75	@	.85
B	.65	@	.75
C	.65	@	.75
Thirds and Blues—			
Repacked	2.00	@	2.25
Miscellaneous	1.60	@	1.80
Black Stockings (Export)	3.90	@	4.25
Roofing Stock—			
Foreign No. 1	1.65	@	1.75

BOSTON

Paper

(F. o. b. Mill)

Ledgers—			
Sulphite	.07½	@	.15
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	.06½	@	.11½
Rag content	.15	@	.30
All rag	36½	@	.65
Writings	.07	@	.20
Superfines	.11	@	.31
News	.03½	@	.04
Book, Super	.06	@	.09
Book, M. F.	.05¾	@	.08½
Book, Coated	.08½	@	.20
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	—	@	.06½
No. 2 Kraft	.05¼	@	.06
Common Bogus	.02	@	.02¾
Delivered New England points			
Straw Boards, rolls	.009		52.50
Straw Board in Sheets, basis 35s to 70s	54.50	@	55.00
Filled News Board	37.50	@	40.00
Chip Board	35.00	@	37.50
Single Manila Lined Chip	47.50	@	50.00
Single White, Patent Coated Newsboard			
Bender	67.50	@	80.00
Wood Pulp Board	80.00	@	85.00
Binder Boards	70.00	@	75.00
(F. o. b. Mill)			
Tarred Felts—			
Regular, carload lots	65.00	@	—

Old Papers

(F. o. b. Boston)

Shavings—			
No. 1 Hard White	3.25	@	3.75
No. 2 Hard White	2.60	@	2.90
No. 1 Soft White	2.50	@	2.60
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	2.35	@	2.45
No. 1 Books, Heavy	1.50	@	1.55
No. 1 Books, Light	—	@	1.15
Manila Env. Cuttings	2.00	@	2.25
No. 1 Old Manila	1.15	@	1.20
White Blank News	1.60	@	1.65
Old Kraft	1.85	@	1.90
Print Manila	.80	@	.90
No. 1 Mixed Paper	.55	@	.57½
Overissue News	.70	@	.85
Old Newspapers	.60	@	.65
Box Board, Chip	.55	@	.60

Bagging

(F. o. b. Boston)

Gunny No. 1—			
Foreign	1.70	@	1.75
Manila Rope—			
Foreign	4.00	@	4.25
Domestic	4.25	@	—
Mixed Strings	.90	@	1.00
Jute Wiil Strings	—	@	1.00
Scrap Burlaps	1.25	@	1.35
Scrap Sisal	1.60	@	1.80
Scrap Sisal for shredding	1.75	@	2.00
Wool Tares, heavy	—	@	1.50
New Burlap Cutting	1.90	@	2.00
Australian Wool Pouches	2.75	@	3.00

Domestic Rags (New)

(F. o. b. Boston)

Shirt Cuttings—			
New White No. 1	.09½	@	.10
Silesias, No. 1	.06	@	.06¼
New Unbleached	.10	@	.10½
Fancy	.04	@	.04½
Washable	.04	@	.04¾
Cottons—According to grades			
Blue Overalls	.06¼	@	.06¾
New Black, soft	.04	@	.04¾
Khaki Cuttings	.04	@	.04¾
O. D. Khaki	.05	@	—
Corduroy	.03	@	.03½
New Canvas	.08	@	.08¼

Domestic Rags (Old)

(F. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	4.75	@	5.25
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Twos and Blues	2.25	@	2.35
Thirds and Blues—			
Repacked	2.00	@	2.15
Miscellaneous	1.75	@	1.90
Roofing Stock—			
No. 1	1.65	@	1.75
No. 2	1.45	@	1.55
No. 3	1.05	@	1.10
No. 4	1.10	@	1.15

Foreign Rags

(F. o. b. Boston)

Dark Cottons	1.60	@	1.65
New No. 1 Shirt Cuttings	9.00	@	10.00
Dutch Blues	2.00	@	2.12½
Lace Curtains	5.10	@	5.50
New Checks & Blues	4.25	@	4.50
Old Fustians	1.90	@	—
Old Linsey Garments	1.85	@	1.90

TORONTO

Paper

(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¾	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¼	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
News f. o. b. Mills—			
Rolls (carloads)	3.25	@	—
Sheets (carloads)	3.75	@	—
Sheets (2 tons or over)	4.00	@	—
Book—			
No. 1 M. F. (carloads)	7.50	@	—
No. 2 M. F. (carloads)	7.25	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.00	@	—
No. 2 S. C. (carloads)	7.75	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and Litho	13.25	@	—
No. 2 Coated and Litho	12.25	@	—
No. 3 Coated and Litho	11.50	@	—
Coated tinted	14.50	@	—
Wrapping—			
Rag Brown	4.95	@	—
White Wrap	5.25	@	—
"B" Manila	5.80	@	—
No. 1 Manila	6.65	@	—
Fiber	6.65	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.00	@	—

Pulp

(F. o. b. Mill)

Ground Wood	30.00	@	31.00
Sulphite easy bleaching	62.00	@	—
Sulphite news grade	62.00	@	—
Sulphite, bleached	75.00	@	—
Sulphate	60.00	@	—

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.00	@	—
Soft White Book Shavings	2.85	@	—
White Blk. News	1.60	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.40	@	—
Light and Crumpled Book Stock	1.25	@	—
Ledgers and Writings	1.50	@	—
Solid Ledgers	1.50	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.80	@	—
Strictly Folded	.80	@	—
No. 1 Mixed Paper	.70	@	—

Domestic Rags

(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.11½	@	—
Fancy Shirt Cuttings	.05¾	@	—

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Paper Mill Stocks and Bonds

Quoted by Taylor & White, 45 Wall street, New York City, to whom all inquiry for quotations on these or any other Securities is referred.

BONDS	BID	ASKED
Abitibi Power & Paper 5s, 1943	90	91
Abitibi Power & Paper 6s, serially to 1934	100	102
American Writing Paper 6s, 1947	81	87
Bastrop Pulp & Paper 6½s, 1940	103	105½
Bedford Pulp & Paper 6½s, 1942	97	100
Belgo-Canadian Paper 6s, 1943	100	103
British Columbia Pulp & Paper 6s, 1950	89	92
Brown Paper Mills Serial 6s, 1941	97	100
Brown Company 5½s, 1946	98	101
Bryant Paper 6s, 1942	98	101½
Canadian Paper Board 7s, 19337	97	99½
Cape Breton Pulp & Paper 6s, 1932	103	..
Celotex Company 6s, 1929	95	99
Celotex Company 6½s, 1939	100	102
Celotex Company of Chicago, Debenture 6s, 1936	95	98
Central Paper Company Serial 6½s, 1942	86	89
Central Paper 7s, 1934	78	..
Champion Coated Paper Serial 6½s, 1934	100	..
Champion Coated Fibre Notes 6s, 1941	100	102
Champion Fibre Notes 6s, 1941	100	102
Champion Fibre Notes 8s, 1930	95	..
Champion Paper Corp. 6s, 1945	95	98
Container Corp. of America Debenture 6s, 1936, ex-warrants	101	104
Continental Paper Products 6½s, 1943	90	99
Cornell Wood Products 7½s, 1937	103	..
Crown Willamette 6s, 1951	101	102
Dells Paper & Pulp Serial 6s, 1938	95	98
Dixon Board Mills Serial 6s, 1942	80	..
Donnaconna Paper 5½s, 1948	93	...
Eastern Manufacturing Co. 7s, 1938	97	100
Escanaba Paper Serial 6s, 1939	98	100
Escanaba Paper 6½s, 1935	96	99
Filer Fibre Serial 7s, 1935	90	95
Fort Irange Paper 7s, 1942	101	..
Fort William Paper 6s, 1946	100	104
Fraser Company 6s, 1950	103	105
Hammermill Paper Serial 6s, 1939	100	..
Hawley Pulp & Lumber 6s, 1946	96	.
Hawthorne Paper Company 6s, 1937	80	..
Hoberg Paper & Fibre 7s, 1937	94	97
Industrial Fibre Corp. Debenture 8s, 1933	100	...
Itasca Paper & Prairie River Power Serial 5½s, 1938	99½	...
Itasca Paper & Prairie River Power Serial 6s, 1938	99	..
Jessup & Moore First 6s, 1945	83	90
Kalamazoo Vegetable Parchment 6s, 1938	99	101
Lake Superior Paper 6s, 1941	105	108
Marathon Paper Mills Serial 5½s, 1942	99	101
Marinette & Menominee 7½s, 1936	103	105
Mead Pulp & Paper 5% Notes Serially, 1937	95	100
Mead Fibre 7s, 1937	97	101
Minnesota Ontario Paper Serial 6s, 1945	97½	100
Murray Bay Paper Serial 6½s, 1947	102	105
Munissing Paper Serial 6s, 1936	98	..
Nekoosa Edwards Paper 6s, 1928-42	96	..
Ontario Pulp & Paper 6s, 1931	108½	110½
Orono Pulp & Paper 6s, 1943	99	..
Orono Pulp & Paper 5s, 1941	96½	..
Oswego Falls Corp. 6s, 1941	99	102
Parker-Young Company 6½s, 1944	98	100
Paterson Parchment Paper 6s, 1938	101	103
Penobscot Chemical Fibre 6s, 1942	102	105
Port Alfred Pulp & Paper 5½s, 1947	98	100
Price Brothers 6s, 1943	105	..
Provincial Paper 5½s, 1947	98½	..
Queen City Paper 7s, 1933	98	..
River Raisin Paper 6s, 1936	98	100
Riordan Pulp & Paper 6s, 1942	102	104
Rolland Paper 6s, 1937	99	101
St. Croix Paper Serial 5s, 1937	99	..
St. Helen Pulp & Paper 6½s, 1931	99	102
St. Maurice Valley Corp. 6s, 1945	101	104
St. Maurice Valley Corp. 5½s, 1947	98½	100½
St. Regis Paper of Canada 6s, 1931	100	101½
St. Regis Paper of Canada 6½s, 1934	100	102
Smith (Howard) Paper Mills 7s, 1941	104	10(
Spanish River Pulp & Paper 6s, 1931	108	11(
Stevens-Thompson Paper 6s, 1942	94	9(
Taggart Brothers 6s, 1944	95	100
Tait Paper & Color Industries 6s, 1934	88	92
Ticonderoga Pulp & Paper 5s, 1930	94	..
Ticonderoga Pulp & Paper 6s, 1940	100	102
Tomahawk Kraft Paper 6s, 1938	98	..
Tomahawk Pulp Paper 7s, 1932	99	..
Tonawanda Paper 5½s, Series 1941	99	102
Union Bag & Paper Power 6s, 1932	98	100
United Wall Paper Factories 6s, 1947	96	99
Warren (S. D.) Company 6s, 1945	103	105
Watab Paper 6½s, 1942	102	...
Waterway Paper Products 6s, 1931	100	101½
Wayagamack Pulp & Paper 6s, 1951	103	105
Westfield River Paper Serial 7s, 1943	89	93
Whitmer-Parson Pulp & Lumber 8s, 1938	20	25
Whitaker Paper 7s, 1942	108	110

STOCKS	BID	ASKED
American Box Board, Pfd.	9¾	10¼
American Box Board, Com.	9¾	10¼
Am. Tissue Mills, 7% Pfd.	90	93
British Columbia P. & P. Pfd.	75	80
Brompton Pulp & Paper, 8% Pfd.	100	..
Champion Fibre, 7% Pfd.	108	110
Diem & Wing, 7% Pfd.	92	97
Eastern Mfg. Co. 1st Pfd.	55	..
Great Northern Paper, Com.	75	78
Hammermill Paper, new 6% Pfd.	100	..
Hinde & Dauch, Com.	125	None Off.
Hinde & Dauch, 6% Pfd.	102	None Off
Holyoke Card & Paper	160	None Off
Marathon Paper Mills, Com.	150	..
Mengel Co., Pfd.	102	104
Midwest Box Co., 8% Pfd.	98	102
Midwest Box Co., 6% Pfd.	95	99
Louis De Jonge Co., 7% Pfd.	94	97
Oxford Papers, Com.	195	..
Oxford Paper Co., Pfd.	108	111
Penobscot Chemical Fibre, Com.	80	..
Richardson Co., Com.	170	..
Sabin Robbins Paper Co., 8% Pfd.	105	110
St. Croix Paper	155	..
St. Regis Paper Co., 7% Cum. Pfd.	105	108
Westfield River Paper Co., 1st Pfd.	Wanted	None Off
West Virginia Pulp and Paper Company	55	57
West Virginia Pulp and Paper, Pfd.	100	103
Whitaker Paper, 7% Cum. Pfd.	105	None Off.

MORE NEWS PRINT MERGERS

(*Continued from page 25*)

sulphite wood pulp and with closely similar yields on a weight basis."

The Alberta Government declared that the manufacture of paper pulp from the cereal straw of the Province had been proven feasible, and optimistically expressed that it would be only a short time before a plant would be in operation in Edmonton. Difficulties were, however, encountered in interesting capital in the enterprise. The time was not the best for the securing of investment funds. Interest apparently dwindled and the matter has been in abeyance for some time until now actively resurrected under what would appear to be more auspicions conditions by the farmers organizations.

A vast amount of scientific and economic data, much of it collected by the Canadian Pacific Railway, is available to those interested.

B. C. Pulp and Paper Co.

Despite the unfavorable conditions which surround the industry in general, earnings of the British Columbia Pulp and Paper Company for the year ended December 31, 1928, were fairly well maintained. Operating profits for the year totalled $723,334. This compares with $777,551 in the preceding year.

Logging Operations Successful

Logging operations in Quebec and the Maritime Provinces have been successful, and as a general rule very few logs will be left in the woods. This is particularly the case in New Brunswick.

Finland's Paper Exports Increase

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., March 20, 1929.—Last year's output of the various classes of paper in Finland showed an increase of around 23,000 metric tons over that of 1927, the total for 1928 reaching approximately 305,000 tons, according to the Department of Commerce.

Exports during the year comprised 133,926 tons by the Finnish Paper Mills' Association, 46,573 tons by the Finnish Paper Bureau, and 66,949 tons by the Kymmene Aktiebolag, a total of 239,758 tons as against 228,462 tons in 1927.

Shipments of paper were distributed as follows: the United Kingdom 87,297 tons, Russia 46,323 tons, North America 41,246 tons, South America 24,061 tons, China 7,868 tons, British India 1,834 tons, Japan 93 tons, and Australia 66 tons. The remainder went chiefly to various European countries.

Fire Damages Fort Edward Mill

[FROM OUR REGULAR CORRESPONDENT]

FORT EDWARD, N. Y., March 25, 1929.—Fire breaking out in the ground wood department of the International Paper Company did considerable damage before being extinguished. The blaze was discovered by the night watchman who discovered it while making the rounds of the mill. He hastened to unloosen the sprinkler system at the plant which was successful in quelling the flames without the aid of the local fire department. The loss was placed at several hundred dollars which is understood to be covered by insurance. Workmen are now busy in making repairs to the structure.